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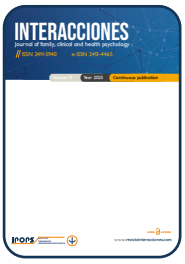

ORIGINAL ARTICLE

The Role of Religiosity and Intrafamilial Relationships in Suicidal Ideation among High-school Adolescents: A PLS-SEM Analysis

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ABSTRACT

Introduction: Suicidal ideation is a critical public health concern, particularly among adolescents, where various psychosocial factors may influence its prevalence. **Objective:** This study examines the relationship between religiosity, intrafamilial relationships, and suicidal ideation among high school students in Metropolitan Lima, Peru. **Methods:** Using Partial Least Squares Structural Equation Modeling (PLS-SEM), we analyzed data collected from 339 students of one high school in Metropolitan Lima, Peru to determine how different dimensions of religiosity (subjective religiosity and religious practice) and intrafamilial relationships (positive perception and difficulties) predict positive and negative suicidal ideation. **Results:** The analysis indicates that the perception of family unity and support significantly reduces negative suicidal ideation and enhances positive suicidal ideation, while difficulties in intrafamilial relationships contribute to enhancing negative suicidal ideation and reduces positive suicidal ideation. Contrary to expectations, only subjective religiosity was found to have a positive significant impact on positive suicidal ideation, suggesting that personal religious beliefs, rather than formal religious practices, play a role in shaping adolescent mental health. **Conclusions:** These findings have implications for suicide prevention strategies, emphasizing the importance of family cohesion and the nuanced role of religiosity in adolescent well-being. Future research should explore these relationships longitudinally and incorporate qualitative insights to better understand the underlying mechanisms.

Keywords: Suicidal Ideation, Religiosity, Intrafamilial Relationship, Adolescents, PLS-SEM.

INTRODUCTION

During the life cycle, individuals face various events, adverse situations, and changes, with adolescence being a key stage of development where biological and psychosocial changes occur. These changes impact different aspects, including physical, social, and cultural domains, leading to hormonal changes, alterations in physical appearance, increased interest in friendships or romantic relationships, exposure to infectious diseases or non-communicable conditions, and behavioral modifications. Adolescents are also more prone to alcohol or substance use at this age; all these factors influence their thinking, vision of the future, and decision-making (Mansilla, 2000).

Regarding adolescence, the World Health Organization (WHO) (2014a) states that up to 50% of mental health disorders manifest for the first time at the age of 14. However, in most cases, these disorders go unrecognized and untreated, leading to severe consequences for mental health throughout life. Additionally, WHO reports that, globally, suicidal is the third leading cause of death among adolescents over the age of

15 (WHO, 2018). Subsequent reports have kept on reporting suicide as the third cause of death in people between 15 and 29 years old (WHO, 2024).

WHO (2017) indicates that around 800,000 people commit suicide each year, estimating that for every adult who ends their life by suicide, more than 20 others may have attempted it. The WHO (2004b), in its World Health Report, notes that the frequency of suicide could be higher since it is often concealed to avoid stigmatization of the individual and their family or for social convenience, disguising such deaths as accidents. Regarding the impact of suicide, WHO (2014b) asserts that suicide constitutes a public health issue, affecting an average of six people in the individual's environment. If it occurs in an educational institution or workplace, the impact extends further.

According to the WHO, economic income was a significant factor in suicide prevalence, as 73% (2024) of suicides occurred in low- and middle-income countries. In the Americas, suicide accounted for 12.4% of external causes of death (not related to a biological disease). In Peru, the Honorio Delgado - Hideyo Noguchi National Institute of Mental Health (INSM HD-HN, from the initials in Spanish) (2013) reports that the number of suicides has significantly increased in recent years, with one to three suicides occurring per day. However, when focusing on suicidal ideation among the Peruvian population, 8.9% have considered ending their lives at some point.

According to INSM HD-HN (2013), in Lima, a suicide attempt occurs every 22 minutes. The primary reasons include relationship difficulties, such as infidelity, or conflicts with parents due to family disputes. In the Mental Health Epidemiological Study conducted by INSM HD-HN (2002), suicidal thoughts were investigated, revealing that 29.1% of adolescents had experienced suicidal ideation at some point. In terms of timeframe, in the past year, 15.3% had considered suicide, and in the past month, 6.9% had such thoughts. A decade later, the same institution conducted a study on a population aged 12 and older, finding significant gender differences, with a higher prevalence (6.8%) of suicidal thoughts among women. Based on the preceding information, it can be inferred that suicidal ideation emerges from early adolescence, making it a risk factor for this population group. It is, therefore, essential to understand the different aspects influencing its occurrence. Considering that the family plays a crucial role in a child's and adolescent's life, providing one of the most significant bonds during development, Soria Trujano (2010) states that the family contributes to emotional expression skills and social integration, which enhance psychological and mental well-being. On the other hand, Pajares (2019) suggests that family conflicts have become increasingly noticeable, leading to emotional and social difficulties. According to the National Demographic and Health Survey conducted by the National Institute of Statistics and Informatics (INEI, 2010), family conflicts have increased by over 50%, with some causes including poor communication and mental health issues, resulting in psychological difficulties for children and adolescents in problem-solving and other areas.

Another crucial factor in personal development is socialization, which is particularly significant during adolescence due to constant interactions and external influences. From a sociocultural perspective, spiritual beliefs and religious practices provide behavioral guidelines and sometimes serve as a source of support during difficult times. Pargament and Mahoney (2005) indicate that approximately 84% of the global population identifies with or shares the beliefs of a religious group. In Peru, religion plays a prominent role, with religious holidays, active participation in processions, and other faith-related activities. According to the Public Opinion Institute of the Pontifical Catholic University of Peru (IOP-PUCP) (2017), 89.1% of rural and urban inhabitants identify as believers, with 20% considering themselves highly religious. In Lima and Callao, 88.2% of the population report having religious beliefs, with 75.2% identifying as Catholic. When asked about the significance of religion, 83.3% stated that it gives life meaning.

Considering these findings and based on Bronfenbrenner's ecological theoretical model (2002, cited in Pérez-Amezcua, 2010), it is proposed that the interaction of different systems significantly influences an individual. Consequently, the microsystem and macrosystem affect mental health and decision-making. In the context of the present work, the way individuals interact with their families is a variable from the microsystem, while the influence of religion is a variable from the macrosystem. In this study, the perception of union, support, and difficulties in the relationships within the family were considered for the microsystem, and the role of the perception of the importance of religious practice and personal experience with it were considered for the macrosystem. The ecological approach allows for an exploration of the multiple factors related to suicidal ideation in adolescents, moving beyond individualistic explanations to consider the complex interactions between interpersonal and sociocultural factors influencing adolescent suicide (Ayyash-Abdo, 2002).

Adolescence is a transitional stage from childhood to adulthood, marked by changes and exposure to new situations that may result in behavioral alterations and emotional instability, affecting physical and mental health (Lillo, 2004). Mental health reports from WHO (2014b) confirm that suicide is a public health issue. Additionally, data from INSM HD-HN (2013) indicate that suicide rates have significantly increased in recent years. The results of a survey on suicidal precursors, conducted on a population aged 12 and older, revealed that suicidal thoughts and desires emerge from this early age (INSM HD-HN, 2013). This phenomenon impacts not only the individual but also their immediate environment, including family, friends, school, and society (Sánchez-Sosa et al., 2010).

Considering individual development, the family is recognized as the primary support system, providing emotional stability, especially in difficult times, and offering strategies for problem-solving (Gómez, 2008). Additionally, social environments and religious beliefs provide meaning and guidance for decision-making, serving as a framework in both daily life and challenging situations. According to IOP-PUCP (2017), Peru is a country with a strong religious identity, influencing socialization processes and functioning as a significant belief system (Marzal, 1996; Marzal et al., 2000). Therefore, the primary objective of this research is to explore the relationship between family

relationships, religiosity, and suicidal ideation among secondary school students in Lima.

THEORETICAL FRAMEWORK

Suicidal Ideation

In recent years, various authors and organizations have shown interest in studying this phenomenon, providing different definitions. According to the WHO (2000), it is defined as actively thinking about taking one's own life or wanting to be dead, without necessarily being associated with behaviors to carry it out. These thoughts related to suicide are known as suicidal ideation, which not only refers to the obsessive, fixed, and persistent nature of the thought but also includes the act of communicating this idea, whether in written or verbal form. Additionally, it is essential to consider these warning signs, such as expressing a desire to die or commit suicide, especially if they are recurrent (Avendaño Prieto et al., 2018).

Suicidal ideation is not a univocal concept, as its definition and variations depend on each author. For example, Konick and Gutiérrez (2005) define it as self-destructive thoughts that precede both a suicide attempt and suicide itself. On the other hand, Mingote et al. (2004) incorporate temporality into suicidal ideation, specifying that, for at least two weeks, the individual persistently experiences thoughts, planning, or a desire to commit suicide. According to Pérez (1996), suicidal ideation can manifest in three aspects: the first relates to the desire to die due to dissatisfaction with one's life; the second occurs when the individual mentally envisions what it would be like if they were to end their life; finally, the individual has suicidal thoughts but has not devised how or when to take their own life.

According to Osman et al. (1998), two factors should be considered: positive suicidal ideation and negative suicidal ideation. The first refers to protective aspects against suicidal thoughts and attempts, such as an individual's hopeful perception of life, experiencing joy in different areas (family, social, academic, professional), and believing they have the ability and control to face adversities. In contrast, negative suicidal ideation includes aspects that increase the risk of suicidal thoughts and attempts, such as having a negative and hopeless vision of the future or believing that death is the only solution to problems. Both factors influence individuals' decision-making, making it essential to analyze the risk and protective factors associated with suicidal ideation.

For this research, suicidal ideation will be defined as the set of thoughts or ideas expressing the intention or desire to die or other suicidal psychological experiences. This idea is considered a precursor to suicidal acts, requiring the consideration of the individual's risk and protective factors, with these thoughts occurring over a minimum period of two weeks (Osman et al., 2003; Villalobos-Galvis, 2010).

Intrafamilial relationships

The concept of family has evolved over time, depending on the perspective from which it is approached. It is generally considered a group of individuals (father, mother, and children), including adopted children or other relatives, who interact with one another, forming a team with a common goal and being united by a bond of love. As the fundamental component of any community, the family contributes to the development of everyone by instilling norms and values (American Psychological Association, 2010; Warren, 2005).

Therefore, it can be inferred that the family is a crucial part of our lives. For this research, the family is considered a group of individuals who are connected, providing support and shelter to household members. Within this dynamic, family interconnections, referred to as "intrafamily relationships," play a key role. This aligns with Rivera Heredia and Andrade Palos (2010), who emphasize that family should involve unity and support among its members, the challenges or conflicts they face, and the verbal communication of ideas, emotions, and events in a respectful environment. The family fulfills various functions, among which the protective role stands out, serving as both a material refuge (home) and an emotional support system (relatives), offering comfort in times of distress and companionship in moments of joy. The economic function involves parents providing financial stability for the family. The educational function relates to the responsibility of teaching and instilling values and behavioral guidelines in children. The health function involves parents monitoring and caring for their children's well-being, preventing illnesses, and ensuring their overall health. Finally, spiritual function contributes to living harmoniously within society (Sabatier et al., 2011). Among the most significant family functions are the protective and spiritual aspects, as they provide not only support but also behavioral guidance, which is especially essential for children, particularly during transitional stages such as adolescence.

Rivera Heredia and Andrade Palos (2010) define intrafamily relationships as the interactions among family members within their internal dynamics, guided by physical, emotional, and psychological characteristics. These relationships consider each family member's perception of household unity, adaptation to change, living styles, and individual ability to face problems. They are also linked to the family's resources within the community and are assessed based on members' perceptions of family dynamics within the household. Rivera Heredia and Andrade Palos (2010) further identify three subdimensions of intrafamily relationships: unity and support, expression, and difficulties.

From the outset, family interaction is directly or indirectly involved in an individual's development, acting as the primary agent for acquiring habits, customs, and knowledge. It provides the necessary tools to cope with adverse circumstances from childhood, fostering emotional stability and gradually leading to psychological maturity. Additionally, within the family, the establishment of behavioral norms, parenting styles, and parental roles contributes to family cohesion, personal development, and personality formation. There is a direct relationship between psychological growth and development and positive intrafamily relationships, which enable individuals to integrate into society in a balanced and independent manner (Agudelo Parra & Gómez Peralta, 2010; Arraz, 2004; Zavala García, 2001).

Religiosity

Religiosity is considered the set of practices according to a religion, including both individual and collective aspects such as prayer, reading sacred texts, attending temples, listening to paraliturgical services, etc. It allows for a gradation in relation to faith and religious practice, which is shared by a group and is of great importance within the cultural context in which an individual develops. Religiosity remains stable over time and manifests in various situations, particularly in those where values, rituals, and knowledge that guide life are put into practice (Salgado, 2012; Rodríguez-Yunta, 2016; Jiménez Segura & Arguedas Negrini, 2004).

Zimmerman (1973) highlights the perspective of various religions regarding family relationships, conceiving them as sacred. In Catholicism, sacred canons establish and promote family unity, such as marriage, which serves as the milestone that founds and establishes the family. These canons also provide guidance for internal interactions, offering directives and norms on how relationships should be between parents and children, spouses, relatives, and individuals outside the family nucleus (Gonzálvez Torralvo & Larrazabal Bustamante, 2019). Lenski (1963) asserts that religiosity includes both an individual expression —such as personal prayer, devotion, and reading sacred books— and an interpersonal expression, such as being part of a congregation of believers or attending church. This social aspect fosters the development of new relationships, and when these activities are shared with family members, they strengthen household relationships and facilitate the transmission of values. However, it is worth mentioning that personal and collective/interpersonal expressions of religiosity do not always occur congruently.

Religiosity can be divided into different dimensions, depending on the author. It consists of two main dimensions: the intrinsic dimension or individual practices, which involve personal thoughts and the daily practice of religion (personal religion); and the extrinsic dimension or organizational practices, which take place within a congregation or group that shares the same faith (Rodríguez-Yunta, 2016).

Regarding individual practice or intrinsic religiosity, religious prayers can have a positive influence on health preservation and recovery, as well as on extending the life of the person for whom the prayers are offered. This has been demonstrated in studies involving patients hospitalized for coronary diseases, where positive findings were observed after a group of believers prayed for their recovery. These patients showed favorable health outcomes, leading to the conclusion that there is a direct relationship between Religion and Health. This study was later replicated with similarly favorable health results (González Valdés, 2010; Martínez, 2014; Salgado, 2012).

The extrinsic dimension, or organizational religious practices, includes ritual and institutional practices aimed at fostering social relationships, security, or status. However, it is important to consider that external religious practices do not necessarily reflect an individual's internal beliefs, as some people do not associate these practices with God. However, there are individuals who strive to practice religion in alignment with their faith, giving meaning to their existence and personal transcendence (Rodríguez-Yunta, 2016; Salgado, 2012). In addition to the intrinsic and extrinsic dimensions, it is also important to consider the subjective dimension, which refers to an individual's perception of the personal significance of religion (Reyes-Estrada et al., 2014).

Hypotheses and Theoretical Model

Figure 1 depicts the theoretical model evaluated in this study. This theoretical model and the hypotheses contained in it were extracted from the theoretical framework. The hypotheses of this study were the following:

H1: Religious Practice has an impact on Positive Suicidal Ideation.

H2: Religious Practice has an impact on Negative Suicidal Ideation.

H3: Subjective Religiosity has an impact on Positive Suicidal Ideation.

H4: Subjective Religiosity has an impact on Negative Suicidal Ideation.

H5: Positive Perception of Intrafamilial Relationships has an impact on Positive Suicidal Ideation.

H6: Positive Perception of Intrafamilial Relationships has an impact on Negative Suicidal Ideation.

H7: Perception of Difficulties in Intrafamilial Relationships has an impact on Positive Suicidal Ideation.

H8: Perception of Difficulties in Intrafamilial Relationships has an impact on Negative Suicidal Ideation.

METHODS

Design

This study used scales from previous research to measure the latent variables of the proposed theoretical model. Data collection was carried out using these instruments (detailed in the following subsection). Data analysis was conducted using PLS-SEM with packages in R. The design of this research is empirical, associative, and explanatory, according to the classification by Ato et al. in their 2013 study. However, by using PLS-SEM and analyzing a new theoretical model, the study is also exploratory (Hair et al., 2019) and predictive, as it considers the explained variance in the dependent variables (Sarstedt et al., 2022).

Sample and Data Collection

The data collection process involved purposive sampling of high school students from a public school in Metropolitan Lima. To be included in the study, participants had to meet the following inclusion criteria: (1) be enrolled in the secondary level of the institution, (2) be of Peruvian nationality, (3) be between 12 and 18 years old, (4) have adequate reading comprehension, and (5) voluntarily agree to participate in the research. Additionally, the following exclusion criteria were applied: (1) students with medical difficulties, (2) students with psychiatric diagnoses, and (3) incomplete responses.

Regarding sample size, random sampling was chosen to obtain enough responses for the proposed theoretical model. To determine the minimum required sample size for the model and data analysis technique, Power Analysis was performed

using the G*Power software (Faul et al., 2007; Faul et al., 2009) with the following parameters: effect size (f^2) = 0.15, error probability (α) = 0.05, power (1-β) = 0.95, yielding a minimum required sample size of 129. Using Power Analysis allowed for the determination of a minimum sample size that provides sufficient statistical significance, also aligning with Cohen's argument (Cohen, 1992; Faul et al., 2009).

Data collection took place in the facilities of the public school, and all high school students were invited to participate. The questionnaire, which included the measurement instruments, was administered on paper during class hours over a two-hour period. A total of 392 responses were collected, of which 1 was excluded due to incomplete responses and 52 were excluded for being from a nationality other than Peruvian, leaving a final valid sample of 339, meeting the minimum required sample size. Regarding biological gender, the final sample included 143 (42.18%) male participants and 196 (57.82%) female participants.

Instruments

To evaluate the proposed theoretical model, three validated scales were used in populations with similar characteristics. The questionnaire used in this study consisted of four sections, excluding the informed consent form. The first section included demographic questions, while the following sections contained the scales used to measure the constructs of the model. The final count of items in the questionnaire was 54.

Suicidal Ideation: The questionnaire titled *Positive and Negative Suicide Ideation (PANSI) Inventory* includes two dimensions: Positive Suicide Ideation (PSI) (6 items) – factors that prevent suicidal behavior – and Negative Suicide Ideation (NSI) (8 items) – factors that contribute to suicidal behavior. It was created and validated in undergraduate students in the United States (Osman et al., 1998) and later applied to various populations, such as hospitalized psychiatric adolescent patients in the United States (Osman et al., 2002), high school adolescents in the United States (Osman et al., 2003), Colombian school and university students (Villalobos-Galvis, 2010), and university students in Metropolitan Lima (Rodas-Vera et al., 2021). For this study, the validated version for university students in Metropolitan Lima was used, maintaining both dimensions with the same number of items (Rodas-Vera et al., 2021). The questionnaire items corresponding to PSI were: 2, 6, 8, 12, 13, and 14. The items corresponding to NSI were: 1, 3, 4, 5, 7, 9, 10, and 11.

Intrafamilial Relationships: The *Intrafamily Relationships Questionnaire* was created and validated in adolescents from Mexico in three versions: a long version with 56 items (Rivera Heredia, 1999, as cited in Rivera Heredia, 2010), an intermediate version with 37 items (Rivera Heredia, 1999, as cited in Rivera Heredia, 2010), and a short version with 12 items (Rivera Heredia & Andrade Palos, 2006). All three versions include three dimensions: (1) Unity and Support, (2) Expression, and (3) Difficulties. The scale has also been used with school students in Metropolitan Lima, obtaining acceptable Cronbach's Alpha values (Palomares, 2018). For the purposes of this study, the dimensions *Unity and Support* and *Expression* were combined into a single dimension due to their theoretical association with a positive perception of intrafamily relationships; this has also been statistically confirmed in school students in Mexico (Castro Castañeda et al., 2021). In this research, the short version of the instrument was used, with 4 items per dimension (Rivera Heredia & Andrade Palos, 2006). The questionnaire items corresponding to *Unity and Support* were: 15, 20, 25, and 30. The questionnaire items corresponding to *Expression* were: 3, 8, 11, and 13. The questionnaire items corresponding to *Difficulties* were: 14, 17, 24, and 32. These numbers correspond to the numeration of the original scale.

Religiosity: The original religiosity scale includes three

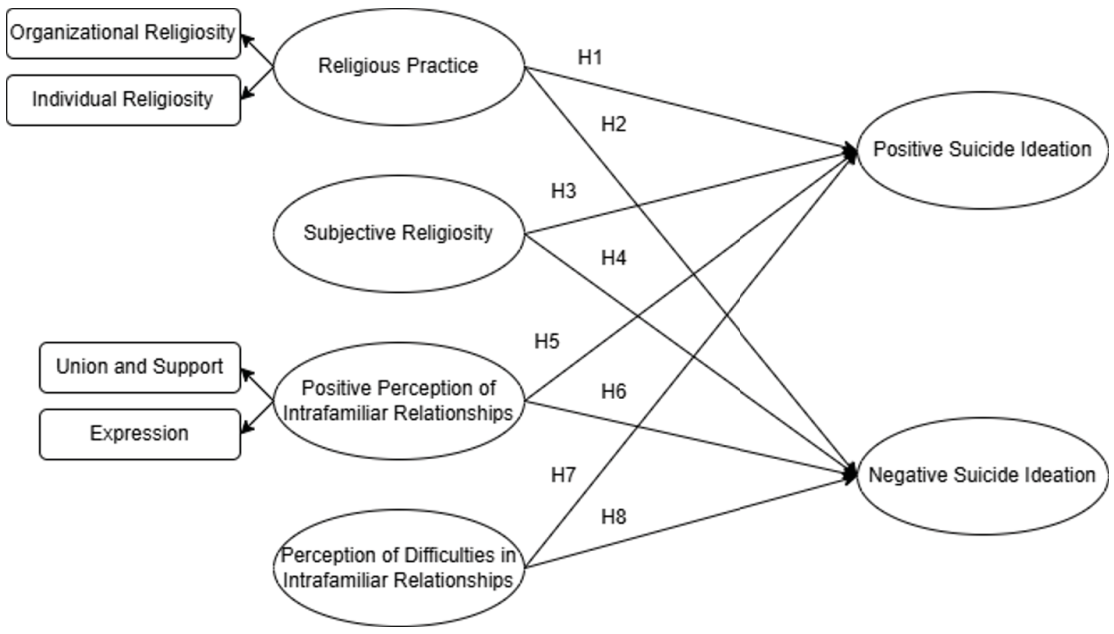

Figure 1. Theoretical Model and Hypotheses

dimensions: (a) Subjective Religiosity (20 items), (b) Organizational Religious Practice (9 items), and (c) Individual Religious Practice (9 items); it was developed and validated in adults from Puerto Rico (Reyes-Estrada et al., 2014). Later, it was validated in university students from Metropolitan Lima, reducing the scale to 28 items with 14 items in the Subjective Religiosity dimension, 8 items in the Organizational Practices dimension, and 6 items in the Individual Practices dimension (López Huamán & Guevara Ccapa, 2015). For this research, the Peruvian version of the instrument was used. The questionnaire items corresponding to Subjective Religiosity were: 2, 4, 7, 12, 13, 14, 15, 16, 19, 21, 22, 23, 24, 25. The questionnaire items corresponding to Organizational Religious Practices were: 1, 6, 9, 10, 11, 17, 26, 27. The questionnaire items corresponding to Individual Religious Practices were: 3, 5, 8, 18, 20, 28.

Data Analysis

The data analysis process consisted of three stages: data entry, data coding, and data analysis. Data entry was manually performed in MS Excel to ensure accuracy; after verification, the columns of the items were coded according to the scales to which they belong. The coding of the items was carried out as follows: items corresponding to Suicide Ideation were coded as "SIX," where X represents the questionnaire item number (e.g., SI1, SI2, etc.). Items corresponding to Intrafamilial Relationships were coded as "IRY," where Y represents the questionnaire item number (e.g., IR3, IR6, etc.), according to the order of the original scale. Items corresponding to Religiosity were coded as "REZ," where Z represents the questionnaire item number (e.g., RE1, RE2, etc.).

For data analysis, Structural Equation Modeling (SEM) was chosen. SEM is a statistical technique used to analyze relationships between latent variables, observed variables, or both simultaneously (Kline, 2023). SEM was used because it is a causal modeling method focused on maximizing the explained variance of dependent variables, enabling prediction rather than merely confirming relationships between latent factors, without requiring normality (Hair et al., 2011; Rigdon et al., 2017). SEM examines causal relationships between variables while accounting for measurement error, making it a more powerful technique than regression analysis (J. F. Hair et al., 2021).

There are two main types of SEM evaluation techniques: Covariance-based SEM (CB-SEM), which is used to confirm theoretical frameworks, and Partial Least Squares SEM (PLS-SEM), which is used for theory development and exploratory research, especially in complex models (Sarstedt et al., 2019). Since this research aims to identify relationships between latent variables measured through questionnaires, analyze their relationships, and is an exploratory study, PLS-SEM was the appropriate analysis method used in this study. PLS-SEM follows a two-stage process typically conducted in SmartPLS or using R packages (J. Hair, Jr. et al., 2021; J. F. Hair et al., 2021). The first stage involves calculating scores for latent constructs, also known as the measurement model evaluation, and the second stage consists of evaluating the structural model (J. Hair, Jr. et al., 2021). In this study, R libraries in RStudio version 2024.12.0+467 (Posit team, 2024) were used for both processes due to the lack of access to the full version of the latest SmartPLS4 (Ringle et al., 2024).

As the first step in the analysis of the measurement model, the lower-order model was assessed; this means that the dimensions of the latent variables were assessed in terms of their indicator reliability, internal consistency reliability, convergent validity, and discriminant validity. It is essential that this is evaluated first due to the high correlation among reflective constructs (Hair et al., 2019). To guarantee sufficient indicator reliability, outer loading (a.k.a. indicator loading) values should be greater than 0.708 (J. Hair, Jr. et al., 2021). Nevertheless, in social sciences indicator loadings less than 0.708 are common, especially with new scales (Hulland, 1999). Indicators with loadings between 0.400 and 0.708 are acceptable but can be considered for removal if doing so increases internal consistency reliability or convergent validity to meet their threshold values, yet content validity should be considered before indicator removal, sometimes resulting in the retention of indicators with low loadings (Kline, 2023; J. Hair, Jr. et al, 2021). Nonetheless, indicators with loadings below 0.40 should always be deleted from the model (J. Hair, Jr. et al., 2021; J. F. Hair et al., 2021).

With respect to the assessment of internal consistency reliability, it is done through the evaluation of composites' Cronbach's Alpha (Cronbach, 1951), Composite Reliability (rhoC, ρC) (Jöreskog, 1973), and Exact or Consistent Reliability (rhoA, ρA) (Dijkstra & Henseler, 2015). Customarily for a robust assessment rhoC and rhoA are recommended (Hair et al., 2021, Kline, 2023) since they are more precise than Cronbach's Alpha alone (Hair et al., 2019). Values higher than 0.7 deemed as reliable, but for exploratory research values that range from 0.6 to 0.7 are considered acceptable, while values that go from 0.7 to 0.9 are desired, whereas values higher than 0.9 can indicate redundancy which reduces construct validity and, thus, should be examined (Diamantopoulos et al., 2012), but values higher than 0.95 are definitely undesirable (J. Hair, Jr. et al., 2021; J. F. Hair et al., 2021). However, values within 0.9 and 0.95 may be acceptable when constructs are narrowly defined, and indicators are closely related; also, in fields like psychometrics highly reliable measures are sought (J. F. Hair et al., 2021). Moreover, values between 0.9 and 0.95 are often accepted if no evidence of problems such as collinearity exists (Nunnally, 1994). Nonetheless, it is important to consider all three values in the assessment of internal consistency reliability as Cronbach Alpha can be a more conservative measure and rhoC too liberal, rhoA is considered a sufficient adjustment in between the others (J. F. Hair et al., 2021).

Regarding convergent validity, Average Variance Extracted (AVE) (Fornell & Larcker, 1981) was computed for the dimensions of the latent variables in the model, treating them as reflective constructs. The minimum acceptable value for AVE in PLS-SEM is 0.5, meaning that the construct explains at least 50% of the indicators' variance (Hair & Alamer, 2022). For the assessment of discriminant validity, two main metrics exist, Fornell-Larcker (FL) (Fornell & Larcker, 1981) and Heterotrait-MonoTrait ratio (HTMT ratio) (Henseler et al., 2015). Even though many researchers are familiar with FL, this measure

should be avoided alone (J. F. Hair et al., 2021) as it fails to operate well when there is little difference among the indicator loadings of a construct (Henseler et al., 2015) and to reliably find problems with discriminant validity (Sarstedt et al., 2019). Henseler, Ringle, and Sarstedt proposed the HTMT ratio to assess discriminant validity, excelling when FL criterion fails (2015). A maximum value of 0.9 applies when constructs are conceptually similar, and a threshold of 0.85 when constructs are distinct conceptually (Henseler et al., 2015).

The assessment of the structural model, which is the second step of the PLS-SEM technique, involves the computation of Variance Inflation Factor (VIF) to assess collinearity, the relevance of the structural path through bootstrapping, the coefficient of determination, effect sizes (f2), and predictability capacities of the model (J. Hair, Jr. et al., 2021; Hair et al., 2019). Unlike CB-SEM, there is still debate on a goodness-of-fit index for PLS-SEM models. On the one hand, some researchers advocate the predictive orientation of PLS-SEM models over conventional fit indices as the technique seeks to maximize explained variance instead of having a confirmatory approach, making it more suitable for exploratory research instead of model-data fit (e.g. Rigdon, 2017; Sarstedt et al., 2022; J. Hair, Jr., 2021). On the other hand, others argue that using fit indices such as SRMR could provide powerful insights, but the interpretation should be cautious (Henseler et al., 2016). Since there is no consensus about the use of fit indices in PLS-SEM and highly accurately defined guidelines on how and when to use any of the fit indices, this study did not focus on the model fit and was only limited to calculation of the VIF, the relevance of the structural paths, the coefficient of determination, effect sizes, and predictability capacities of the model for the evaluation of the structural model. Even though Q2 value is typically used to evaluate the predictive capacity of a PLS-SEM model, the seminr library R Studio does not provide a function to compute Q2 at the time the analysis was performed. Hence, the assessment of the predictability capacities of the model was done through PLSpredict (Shmueli et al., 2016) by using the pls_predict function and capacities of R Studio (J. F. Hair, Jr. et al., 2021) utilizing the DA technique, due to its high accuracy (Ray et al., 2017) with 10 folds and 10 repetitions (Shmueli et al., 2019). The predictive power was evaluated by comparing the out-of-sample values for a Linear Regression Model (LM) benchmark against the RMSE and MAE values (Danks & Ray, 2018) using the following criteria (Shmueli et al., 2019):

- High predictive power: All indicators show lower values than the LM benchmark.
- Medium predictive power: The majority or the same number of indicators show lower values than the LM benchmark.
- Low predictive power: The minority of indicators show lower values than the LM benchmark.
- Lack of predictive power: None of the indicators show lower values than the LM benchmark.

Ethical Considerations

This study was conducted in accordance with the ethical principles of the Declaration of Helsinki and the American Psychological Association (APA). Our study used secondary data; therefore, it does not pose an ethical risk to participants and does not require evaluation by an ethics committee. Student participation was voluntary, and confidentiality and anonymity were ensured during data collection in the primary study. Additionally, parents or legal guardians signed a prior informed consent form detailing the study's objectives, potential risks and benefits, and the participant's right to withdraw from the study at any time without consequence. Students also provided their informed assent to participate; the study's purpose and their rights as participants were explained to them. No financial incentives were offered for participation. During data collection at the school, a clinical psychologist affiliated with the College of Psychologists of Peru addressed any difficulties and provided emotional support and containment for any participants who required it.

RESULTS

Demographic report

The participants in this study encompassed students of all the years of higher education of a school in Lima, Peru. Regarding the biological gender, sample included 57.82% (196) males and 42.18 % (143) females. With respect to students' types of families in the sample, 38.05% (129) had nuclear families, 26.25% (89) had extended families, 24.78% (84) had single-parent families, 7.67% (26) had blended families, and 3.24% (11) had families consisting of their legal guardians. In relation to the religious background of the sample, 69.03% (234) were catholic, 16.52% (56) reported that they did not have religious beliefs, 5.90% (20) were evangelical Christians, 5.01% (17) were Christians, 3.54% (12) were of other religions. In relation to the age, it ranged from 12 to 18 years old (M = 14.21, SD = 1.50).

Assessment of data

As mentioned before, PLS-SEM does not assume the normality of the data; on the contrary, it is, in fact, a non-parametric approach, and the assessment of parameters of normality of the data is recommended to guarantee robustness of the approach (J. Hair, Jr. et al., 2021). For this assessment, a strict range was chosen for skewness and kurtosis with a range of -2 and +2 (J. Hair, Jr. et al., 2021; Kline, 2023), meaning that if the skewness and kurtosis values of each item in the data are within the range of -2 and +2, robustness of results is guaranteed. In the study, the values of skewness and kurtosis were within the recommended range for all variables, having as range for skewness [-1.217; +1.615] and for kurtosis [-1.217; +1.632].

A lower-order reflective measurement model

In the first assessment of the measurement model, the indicator loadings only showed four indicators with values lower than 0.4 that had to be removed due to not meeting the criteria (J. Hair, Jr. et al., 2021), which were SI2, RE12, RE13, and RE14. The values for internal consistency reliability only showed issues with rhoA for Negative Suicide Ideation with a value of 0.951, higher than the threshold of 0.95 (J. Hair, Jr. et al., 2021; J. F. Hair et al., 2021) and for the dimension of Subjective Religiosity with a value of 0.912, suggesting potential redundancy (Diamantopoulos et al.,

2012). For convergent validity, the dimensions with AVE lower than the minimum of 0.5 (Hair & Alamer, 2022) were Subjective Religiosity, Individual Religious Practices, and Positive Suicide Ideation with values of 0.422, 0.489, and 0.433. The other dimensions obtained values within the sought ranges; however, Difficulties had a 0.671 Cronbach Alpha score, but this value is found to be acceptable as this is exploratory research (J. Hair, Jr., 2021), and Cronbach Alpha can limitations due to its assumptions (J. Hair, Jr. et al. , 2021); also, of rhoC and rhoA were higher than the threshold of 0.7 (J. Hair, Jr. et al., 2021; J. F. Hair, 2021). Regarding the discriminant validity, two issues were identified; (1) the HTMT ratio value of Organizational Religious Practice with Individual Religious Practice was 0.987, and (2) the HTMT ratio value of Union and Support with Expression was 0.915, which is higher than the value threshold of 0.9 for similar constructs (Henseler et al., 2015).

After removing the indicators with loadings less than 0.4, the measurement model was assessed again to check how that impacted other values in the evaluation criteria. The internal consistency reliability values improved, and the convergent validity also improved, having only one AVE value below 0.5 for Individual Religious Practice and one rhoA value higher than 0.95 for Negative Suicide Ideation. The next step is to assess indicators with loadings between 0.4 and 0.708 for removal to check if either internal consistency reliability or convergent validity improves, respecting the stablished guidelines (Kline, 2023; J. Hair, Jr. et al, 2021), previously detailed in the methodology section. The indicator SI9 was removed from the model due to its redundancy – its meaning was already captured in other indicators – resulting in a desired rhoA value of 0.94 for Negative Suicide Ideation. The indicator RE5, with the lowest loading of 0.649 among all the other indicators in the construct of Individual Religious Practice, was removed, as the wording may have been confusing, and a similar item exists already exists in the Organizational Religious Practice construct, resulting in an AVE value of 0.516, fulfilling the criterion. Table 1 summarizes the final version of the assessment of the lower-order measurement model in terms of indicator reliability, internal consistency reliability, and convergent validity. However, the HTMT values were still problematic for two pairs, which are as follows: (1) Individual Religious Practice with Organizational Religious Practice and (2) Union and Support with Expression. This issue was solved by merging the construct into two higher-order constructs, respectively, as the cross-loading analysis showed no issues and higher-order modeling can capture shared variance effectively (Henseler et al., 2015; J. Hair, Jr., 2021).

Evaluation of the higher-order model

The higher-order model needs to be assessed just as the lower-order model, starting with the measurement model, and following the structural model, if measurement model assessment fits the established criteria (J. Hair, Jr., 2021; Hair et al., 2019). The higher-order model was defined as a reflective measurement model due to the nature of the constructs; this means that no changes for both evaluations of the model were needed as no formative constructs were included.

Evaluation of the measurement model

Table 2 provides a summary of the outer loadings, internal consistency reliability, and convergent validity of the newly added HOCs. All the constructs and their indicators met the expected values for the assessment of the measurement model. In this type of assessment, the higher-order constructs (HOC) have as indicators their corresponding lower-order constructs (LOC) with their corresponding loadings. The other LOCs experienced no changes in their internal consistency reliability and convergent validity. Likewise, the LOCs' indicators' reliability suffered no changes as no changes were made to the LOCs composition.

Table 3 provides discriminant validity in the form of Heterotrait-Monotrait Ratio of Correlations (HTMT) among constructs. All the HTMT ratios were below the specified threshold. The LOC of Religious Practices with the HOC of Religious Practice had a HTMT ratio of 0.854, but since these constructs are like each other and closely related, the threshold of 0.9 applies (Henseler et al., 2015), resulting in satisfactory discriminant validity for the measurement model.

Evaluation of the structural model

Table 4 provides the VIF values, the f^2 values, and the assessment of the significance of the structural paths. The VIF values are below the recommended threshold of 3 for exploratory studies (Sarstedt et al., 2017a; 2017b), meaning that no collinearity issues are present in the model (Becker et al., 2015; Mason & Perreault, 1991). The VIF values are the same for both outcome variables (i.e. Positive Suicide Ideation and Negative Suicide Ideation) because both have the same predictors in the model. The assessment of the structural paths involved the use of bootstrapping with the recommended number of 5000 generated samples (J. Hair, Jr. et al., 2021), a seed parameter in the function in R Studio of value 123 provided here so that results are replicable (J. F. Hair et al., 2021), and an alpha level of 0.05. The bootstrapping results show that H1, H2, and H4 were not supported, while H3, H5, H6, H7, and H8 were supported. The significance of the paths was assessed with the confidence interval of the bootstrapping process; if 0 was included in the interval, the paths were deemed as not significant.

Regarding the coefficients of determination, R^2 and R^2 adjusted, for PSI these were 0.229 and 0.220, respectively; while for NSI these were 0.199 and 0.189, respectively. The structural model demonstrated an acceptable level of explanatory power with both PSI and NSI - the endogenous constructs. The values obtained for R^2 and R^2 adjusted represent moderate explanatory power (Cohen, 1988; J. Hair, Jr. et al., 2021). The f^2 values, provided in table 4, indicate that for the supported hypotheses the exogenous variables have a small effect on the endogenous variables (i.e. PSI and NSI), while for the unsupported hypotheses, Subjective Religiosity relationship with NSI and Religious Practice relationship with PSI, there is negligible or no effect (Cohen, 1988; J. Hair, Jr. et al., 2021). With regards to the predictive power of the model, the PLSpredict (Shmueli et al., 2016) formula of R Studio was used (J. F. Hair et al., 2021). As recommended, the technique employed was

Table 1. Indicator Reliability, Internal Consistency Reliability, and Convergent Validity values of LOCs.

Constructs	Indicators	Loadings	Cronbach's Alpha	rhoC	rhoA	AVE
Positive Suicide Ideation	SI6	0.70	0.76	0.84	0.77	0.51
	SI8	0.68				
	SI12	0.66				
	SI13	0.70				
	SI14	0.82				
Negative Suicide Ideation	SI1	0.85	0.92	0.94	0.94	0.68
	SI3	0.89				
	SI4	0.55				
	SI5	0.82				
	SI7	0.84				
	SI10	0.89				
	SI11	0.89				
Subjective Religiosity	RE2	0.70	0.91	0.93	0.92	0.53
	RE4	0.71				
	RE7	0.64				
	RE15	0.68				
	RE16	0.69				
	RE19	0.78				
	RE21	0.64				
	RE22	0.78				
	RE23	0.75				
	RE24	0.81				
	RE25	0.79				
Organizational Religious Practice	RE1	0.74	0.88	0.90	0.90	0.53
	RE6	0.75				
	RE9	0.63				
	RE10	0.76				
	RE11	0.77				
	RE17	0.76				
	RE26	0.79				
	RE27	0.60				
Individual Religious Practice	RE3	0.71	0.78	0.84	0.80	0.52
	RE8	0.80				
	RE18	0.67				
	RE20	0.71				
	RE28	0.70				
Union and Support	IR15	0.85	0.84	0.90	0.86	0.68
	IR20	0.85				
	IR25	0.73				
	IR30	0.87				

Table 1. Continued.

Difficulties	IR14	0.8	0.67	0.80	0.72	0.50
	IR17	0.80				
	IR24	0.54				
	IR32	0.66				
Expression	IR3	0.76	0.79	0.86	0.80	0.61
	IR8	0.79				
	IR11	0.84				
	IR13	0.74				

Note: rhoC = Composite Reliabity. rhoA = Exact or Consistent Reliability. AVE = Average Variance Extracted.

Table 2. Summary of HOCs reliability and validity values.

Higher-order Construct	Lower-order Construct	Outer Loading	Cronbach's Alpha	rhoC	rhoA	AVE
Religious Practice	Organizational Religious Practice	0.96	0.88	0.94	0.92	0.89
	Individual Religious Practice	0.93				
Positive Perception of Intrafamilial Relationship	Union and Support	0.93	0.86	0.93	0.86	0.87
	Expression	0.94				

Note: rhoC = Composite Reliability. rhoA = Exact or Consistent Reliability. AVE = Average Variance Extracted.

Table 3. HTMT matrix for the Higher-order model.

	RP	SR	PIR	DI	PSI	NSI
RP	.	.	.	.	.	.
SR	0.85	.	.	.	.	.
PIR	0.15	0.19	.	.	.	.
DI	0.12	0.14	0.65	.	.	.
PSI	0.26	0.31	0.49	0.45	.	.
NSI	0.15	0.11	0.46	0.39	0.46	.

Note: RP =Religious Practices. SR = Subjective Religiosity. PIR = Positive Perception of Intrafamilial Relationship. DI = Perceived Difficulties in Intrafamilial Relationship. PSI=Positive Suicide Ideation. NSI=Negative Suicide Ideation. HTMT=Heterotrait-Monotrait.

Table 4. Collinearity, Effect Size, and Path Significance Assessment.

Hypotheses (paths)	VIF	f^2	Path Coefficient (Bootstrap Mean)	T Statistic	2.5% CI	97.5% CI	Significance
H1: RP -> PSI	2.42	0	0.000 (0.017)	0.01	-0.13	0.17	No
H2: RP -> NSI	2.42	0.01	-0.117 (-0.123)	-1.46	-0.28	0.04	No
H3: SR -> PSI	2.44	0.02	0.211 (0.206)	2.84	0.06	0.35	Yes
H4: SR -> NSI	2.44	0.00	0.048 (0.049)	0.64	-0.10	0.20	No
H5: PIR -> PSI	1.39	0.07	0.268 (0.270)	4.52	0.15	0.39	Yes
H6: PIR -> NSI	1.39	0.10	-0.336 (-0.339)	-5.52	-0.46	-0.22	Yes
H7: DI -> PSI	1.36	0.03	-0.186 (-0.193)	-2.97	-0.31	-0.07	Yes
H8: DI -> NSI	1.36	0.02	0.147 (0.151)	2.31	0.03	0.27	Yes

Note: RP =Religious Practices. SR = Subjective Religiosity. PIR = Positive Perception of Intrafamilial Relationship. DI = Perceived Difficulties in Intrafamilial Relationship. PSI=Positive Suicide Ideation. NSI=Negative Suicide Ideation. VIF= Variance Inflation Factor.

predictive_DA, as this technique has been proven to have the highest accuracy (Danks, 2021), with 10 folds and 10 repetitions (Shmueli et al., 2016). The results showed that the model has high predictive power since all the predicted values are higher than both compared benchmarks of LM for MAE and RMSE values for all the indicators (Shmueli et al., 2019).

DISCUSSION

Main Findings

This study aimed to explore how much Religiosity and Intrafamilial Relationships impact Positive Suicide Ideation and Negative Suicide Ideation among high-school students at a public school in Metropolitan Lima, Peru. PLS-SEM was used to evaluate the proposed theoretical model. The results showed that the perception of intrafamilial relationships can predict negative and positive suicidal ideation, but in terms of the religion-related variables under study, only subjective religiosity can predict positive suicidal ideation.

Comparison with Other Studies

In this study, it was found that the perception of union and support together with expression within the family, referred to as Positive Perception of Intrafamilial Relationship in this work, has a positive relationship with the factors that prevent suicidal behavior, referred to as Positive Suicide Ideation, and a negative relationship with the factors that foster suicidal behavior, referred to as Negative Suicide Ideation. Therefore, family relationships during adolescence are a factor that predisposes certain behaviors and thoughts, contributing to the adolescent's psychological well-being (Gonzales, 2017). The results obtained reaffirm the findings of Di Rico et al. (2016), indicating that when there is parental support, the risk of suicidal ideation is lower among students aged 13 to 18. Similarly, Bahamón et al. (2018) and Aburto et al. (2017) support this result, stating that suicidal thoughts are more prevalent when family relationships are based on authoritarianism, with psychological control and imposition by parents.

In contrast, Quitl and Nava (2015) report no relationship between suicidal thoughts and family functionality; however, it is important to note that their study was conducted on a university population, where family dynamics and parental influence differ from those in adolescence. It is also important to mention that the study found differences in intrafamilial relationships, specifically in the dimension of unity and support, across different age groups. Younger students scored higher, while scores for unity and support in family relationships decreased as age increased. This demonstrates that the relationship with parents, particularly the bond with them, diminishes as adolescents grow older. Additionally, as Rodríguez and Oduber (2015) mention, other significant relationships, such as friendships, develop, influencing the young person's thoughts and behavior.

Pérez-Amezcua et al. (2010) agree with these findings, stating that within the microsystem, belonging to families with low levels of cohesion influences the occurrence of suicide. Furthermore, Ayyash-Abdo (2002) considers a lack of family solidarity and volatility, along with low emotional closeness with parents, as risk factors. This evidence highlights that family unity and support, especially from parents, play a crucial role in the emergence of suicidal thoughts in adolescents.

Menacho (2016) similarly emphasizes that dialogue, expression, and communication within the family serve as protective factors, stressing that poor communication between parents and children can significantly increase the risk of suicidal ideation. Additionally, Cárdenas (2017) highlights that when adolescents experience greater family satisfaction, the risk factors for suicidal ideation decrease.

With regards to the perception of difficulties in the intrafamilial relationship, the results showed that this has a positive relationship with Positive Suicide Ideation, but a negative relationship with Negative Suicide Ideation. Gonzales (2017) and Gonzales et al. (2016) support these findings, stating that when there is domestic violence, suicidal thoughts increase. Similarly, Forero et al. (2017) found a relationship between severe family dysfunction and suicidal thoughts. Therefore, it can be interpreted that the greater the presence of difficulties or problems within the family, the more it will influence how the adolescent feels. As Chávez et al. (2015) mention, family conflicts make adolescents feel angry, sad, lonely, and depressed. This was reaffirmed by Machaca and Mamani (2017), who stated that in such family situations, aggressive behaviors may also arise among adolescents (Alayo Ñamoc, 2017), all of which increase the risk of suicidal behavior.

This study also explored the relationship between dimensions of religiosity and suicide ideation. It was found that Religious Practice has a positive relationship with Positive Suicide Ideation, but a negative relationship with Negative Suicide Ideation; however, these relationships were not statistically significant. Nevertheless, Subjective Religiosity had a positive statistically significant relationship with Positive Suicide Ideation, while a positive statistically insignificant relationship with Negative Suicide Ideation. The interpretation of this is that the beliefs and thoughts of the importance of religiosity in students' identity play a significant role in enhancing the factors that prevent suicidal ideation rather than the role of religious practice. A study in Mexico found that greater development of the religious aspect in adolescents leads to lower suicidal ideation, making it a protective factor, like other variables such as resilience, as they help individuals cope with difficulties (López Huamán & Guevara Ccapa, 2015). In the same vein, Salgado (2012) argues that using religious beliefs and behaviors, such as praying, attending mass, or participating in prayer chains, helps individuals mitigate the negative consequences of adverse events, thus developing the concept of "religious coping," which refers to the positive effect of religion on health. On the other hand, if a person is distant from or does not practice religiosity, this can negatively impact various aspects of their life, increasing risk factors for physical and mental health, such as physical inactivity, drug use, and early sexual experiences (Gómez-Bustamante & Cogollo-Milanés, 2015). Similarly, Pérez-Amezcua et al. (2010) affirm that macrosystem factors, such as beliefs, serve as protective factors in reducing suicide risk. Range et al. (1999) indicate that people in Spanish-speaking countries have a deep respect for Catholicism and, consequently, perceive suicide as an

unacceptable act regardless of the circumstances. However, contrary to this claim, this research did not find a significant relationship between religiosity dimensions and suicide ideation, except for Subjective Religiosity, which was positively associated with Positive Suicide Ideation.

Implications

The main implications that this article provides are for public health, public administration, and school management. Based on the results of this study, public health practitioners can focus their efforts on designing interventions at group and individual levels that account for the perception of the quality of the intrafamilial relationship from the perspective of teenagers. The public administration should investigate practices of religious groups that can contribute to enablers of suicidal ideation, and vulnerable populations should be their focus in programs that prevent suicide. Schools should allocate resources to improve the quality of the intrafamilial relationship by involving parents or guardians in activities that make them aware of this importance and educate them on how to foster their children's well-being. Another implication relies on scientific literature; more research is needed to understand how these variables behave and affect each other in different contexts; however, this research shall be done utilizing adequate techniques.

Limitations and Future Research

Just like any other study, this work has different limitations. In this subsection, the main limitations of this study are detailed. First, even though all the students at the high school level in the school were invited to participate in the study, convenience sampling can limit the generalizability of the findings to other contexts and populations (Etikan et al., 2016; Bornstein et al., 2013). Future studies should explore the proposed model with random or stratified sampling techniques. Also, self-reporting methods can introduce bias in the means of socially desirable responses and others (Podsakoff et al., 2003). Further research that incorporates factual variables that can reflect the constructs measured is recommended. Moreover, even though adapted and validated versions of the instruments were employed, there may be limitations within specific populations (van de Vijver & Leung, 2011; Bravo et al., 2018) such as, people who report no religious beliefs or populations with religious beliefs different than widely spread conventional western religions. Researchers should focus on adapting instruments so that they can accurately measure the desired constructs within the population of interest; in addition, the psychometric properties of instruments need to be revised as changes in society may imply a change in the measurement of the construct. Another limitation of the study was the cross-sectional design as through this means the changes over time cannot be assessed (Wang & Cheng, 2020) and the responses may have been affected by recent events (Sliwinski, 2008). Subsequent research should use a longitudinal design to overcome such limitations. Lastly, the quantitative approach did not allow an in-depth exploration of the variables and the context (Creswell & Creswell, 2018) or to explain why these relationships happen (Babbie, 2020). Future efforts should focus on conducting qualitative or mixed-methods research to uncover how and why relationships among variables occur.

Strengths

Even though there is extensive evidence on the relationship between religiosity with suicide ideation and intrafamilial relationship with suicide ideation, most of the quantitative evidence in regard to one or both of these pairs comes from correlational and regression studies. To the best of our knowledge, this is the only study that attempts to predict Positive Suicide Ideation and Negative Suicide Ideation from the scores of dimensions of religiosity and intrafamilial relationship. Furthermore, this study used PLS-SEM, which is a recommended technique to quantitatively analyze the relationships among latent variables and a suitable technique given the exploratory and predictive focus of the study (J. Hair, Jr. et al., 2021).

Conclusion

Suicidal ideation is of social and public health interest as it is related to suicidal behavior. For this reason, it is important to study what variables can predict factors that enable it and factors that prevent suicide. This study analyzed dimensions of religiosity and dimensions of intrafamilial relationships to see how much they can predict Positive Suicide Ideation and Negative Suicide Ideation. A theoretical model was built and assessed, indicating that the intrafamilial relationship predicts both types of suicidal ideation, but more research is needed to uncover the impact of religiosity on suicidal ideation.

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Nataly Abigail Belzusarre García: Conceptualization, and Writing - Original Draft.

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CONFLICT OF INTEREST

The author declares no conflict of interest.

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DATA AVAILABILITY STATEMENT

The authors attach the database in supplementary material 2.

DECLARATION OF THE USE OF GENERATIVE ARTIFICIAL

INTELLIGENCE

The authors declare that they have not made use of artificial intelligence-generated tools for the creation of the manuscript, nor technological assistants for the writing of the manuscript.

DISCLAIMER

The authors are responsible for all statements made in this article.

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El papel de la religiosidad y las relaciones intrafamiliares en la ideación suicida entre adolescentes de secundaria: Un análisis PLS-SEM

RESUMEN

Introducción: La ideación suicida es un problema crítico de salud pública, particularmente entre los adolescentes, donde diversos factores psicosociales pueden influir en su prevalencia.

Objetivo: Este estudio examina la relación entre religiosidad, relaciones intrafamiliares e ideación suicida en estudiantes de secundaria de Lima Metropolitana, Perú.

Métodos: Utilizando el modelo de ecuaciones estructurales por mínimos cuadrados parciales (PLS-SEM), analizamos datos recolectados de 339 estudiantes de una institución educativa de Lima Metropolitana para determinar cómo distintas dimensiones de la religiosidad (religiosidad subjetiva y práctica religiosa) y de las relaciones intrafamiliares (percepción positiva y dificultades) predicen la ideación suicida positiva y negativa.

Resultados: El análisis indica que la percepción de unidad y apoyo familiar reduce significativamente la ideación suicida negativa y potencia la ideación suicida positiva, mientras que las dificultades en las relaciones intrafamiliares contribuyen al aumento de la ideación suicida negativa y disminuyen la ideación positiva. Contrario a lo esperado, solo la religiosidad subjetiva mostró un impacto positivo y significativo sobre la ideación suicida positiva, lo que sugiere que las creencias religiosas personales, más que las prácticas religiosas formales, influyen en la salud mental del adolescente.

Conclusiones: Estos hallazgos tienen implicancias para las estrategias de prevención del suicidio, al destacar la importancia de la cohesión familiar y el papel matizado de la religiosidad en el bienestar adolescente. Investigaciones futuras deberían explorar estas relaciones de forma longitudinal e incorporar enfoques cualitativos para comprender mejor los mecanismos subyacentes.

Palabras claves: Ideación suicida, religiosidad, relaciones intrafamiliares, adolescentes, PLS-SEM.