





million people will die by suicide (WHO, 2014). Apart from these figures, which the reader will know how to evaluate and weigh up, suicide and any of its manifestations have an impact on the personal, family, school, social, and health levels, both in present and future society.

Thus, given the depth of the problem, it is imperative to take action to prevent this situation. In fact, the WHO has called for the different countries of the world to introduce suicide prevention into their health «agendas». Among the actions that can be implemented are training, information, raising awareness, and the sensitization of society in general (Fonseca-Pedrero & Díez, 2018), and of psychology practitioners in particular. Suicide prevention strategies can also be implemented in social, healthcare, and/or educational contexts, to mention a few (O'Connor & Pirkis, 2016). In fact, measures in the field of suicide prevention have shown their efficacy, demonstrating that suicide is preventable (Fonseca-Pedrero et al., 2019; O'Connor & Pirkis, 2016; Zalsman et al., 2016). One form of prevention is the early detection and identification of possible cases of suicidal risk or the screening of participants in samples of the general population who may be at risk (e.g., presenting clear suicidal planning or having made previous suicide attempts). Once a possible case has been detected and identified, evidence-based prophylactic treatments could be implemented, with known benefits at multiple levels. Let us be clear; the earlier it is detected and identified and effectively intervened, the better. However, it is curious that in the context of Spanish psychology there are few properly validated measurement instruments with norms in representative samples of the adolescent population. Moreover, the measurement instruments for the assessment of suicidal behavior are scarcely used by Spanish psychologists (Muñiz, Hernández & Fernández-Hermida, 2020), and their use by mental health practitioners is more the exception than the rule (Xifró, Suelves, Martín-Fumadó, & Gómez-Durán, 2015).

The purpose of this paper is, therefore, to present the Paykel Suicide Scale (PSS) (Paykel, Myers, Lindenthal, & Tanner, 1974) as a tool for evaluating suicidal behavior in Spanish youth. First, a brief conceptual delimitation of suicidal behavior is provided, and epidemiological data, psychological models, and risk and protection factors are mentioned. Second, the evaluation of suicidal behavior is presented as central to detection, identification, prevention, and intervention, as well as the understanding of this phenomenon. Thirdly, the Paykel Scale (Paykel et al., 1974) is introduced, together with its psychometric properties and, specifically, its scale in the adolescent population. Finally, the article is concluded with a recapitulation.

### CONCEPTUAL DELINEATION OF SUICIDAL BEHAVIOR

Suicidal behavior is a complex, multidimensional, and multicausal phenomenon whose delimitation, evaluation, treatment, and prevention require a holistic approach, focused on the person and his or her context (families, schools, legal measures, etc.), including biological, psychological, and

social variables. Obviously, there is no easy answer for the solution of this phenomenon.

Etymologically, suicide (*sui*: «oneself»; *caedere*: «to kill») is the act of intentionally provoking one's own death. Suicidal behavior encompasses many more manifestations than merely completed suicide, and it is a concept for which no consensus has yet been reached in the 21st century (Goodfellow, Kölves, & de Leo, 2018). In fact, some authors prefer to talk about "penacide" (killing the pain or killing the suffering) or "psychalgia" (psychological pain, significant suffering at an existential level that affects the person as a whole, and that can lead the person to consider suicide).

Suicidal behavior has different manifestations, which range in severity from ideation to completed suicide (see Figure 1). In this sense, several authors consider suicidal behavior from a dimensional point of view (Anseán, 2014; O'Connor & Pirkis, 2016), which is limited by two poles, well-being and completed suicide. Depending on the expression (ideas of death, attempts, etc.) within this continuum, as well as its intensity, frequency, and associated discomfort, the level of risk of consummated suicide will be higher for some people than others, theoretically.

### PREVALENCE OF SUICIDAL BEHAVIOR

According to the INE and the *Observatorio del Suicidio* [Spanish Suicide Observatory], 3,679 people lost their lives due to suicide in the year 2017, indicating an increase of 110 deaths as compared with 2016 (an increase of 3.1%). In essence, it involves twice as many deaths as traffic accidents, 13 times more than homicides, and 80 times more than gender violence, and it is also, after tumors, the main cause of death among Spanish youth (from 15 to 34 years of age). The state average rate was 7.9 per 100,000 inhabitants. In 2018, according to the figures available on the INE website, a total of 3,539 persons died in Spain as a result of suicide. In the adolescent and youth population, the epidemiological data also speak for themselves. Specifically, in the year 2018, 268 persons between the ages of 15 and 29 took their own lives in Spain.

Suicidal behavior is a polyhedral concept that refers not only to completed suicide, but also to suicidal ideation, suicidal communication, and suicide attempts. It is of interest to analyze the rates in these different manifestations as well, since it has been seen that, for example, suicidal ideation is a risk factor for subsequent suicide (Castellvi-Obiols & Piqueras, 2018). A meta-analysis (Lim et al., 2019) found that in adolescents the lifetime prevalence and 12-month prevalence of suicide attempts were 6% (95% CI: 4.7-7.7%) and 4.5% (95% CI: 3.4-5.9%), respectively. With regards to suicidal ideation, the lifetime prevalence and 12-month prevalence were 18% (95% CI: 14.2-22.7%) and 14.2% (95% CI: 11.6-17.3%), respectively. In Spain the lifetime prevalence of suicidal ideation in the adolescent population is around 30%, while the prevalence of suicide attempts is approximately 4% (Bousoño et al., 2017; Carli et al., 2014; Fonseca-Pedrero et al., 2018). Referring to differences in suicidal behavior



between men and women, men show a higher number of completed suicides than women (a ratio of 3:1), while suicide attempts place women in a ratio of 3:1 to men. In samples of adolescents and young adults, women are at greater risk of attempted suicide (OR 1.96, 95% CI 1.54-2.50), and men of completed suicide (HR 2.50, 95% CI 1.8-3.6) (Miranda-Mendizabal et al., 2019). Overall, the previous literature indicates that for every person who commits suicide there are approximately 20 suicide attempts per year worldwide.

**PSYCHOLOGICAL MODELS OF SUICIDAL BEHAVIOR**

Over the years, various etiological models have been proposed to explain suicide. This is not intended to be an exhaustive review, so we refer the reader to excellent previous work (O'Connor & Nock, 2014; O'Connor & Pirkis, 2016). There is no doubt that analyzing and understanding human behavior, in this case suicide, is a very complex matter. It is a difficult undertaking with countless twists and turns, where many questions remain unanswered and are still in the dark. Possibly, the solution lies in the complex dynamic interaction that is established between the biological, psychological, and social factors experienced by a particular person with a particular biography and particular circumstances. It is known that human behavior, due to its enormous complexity and diversity, is not a good fit with the linear, the static, or the unicausal, and it demands an individual, propositional, multidimensional, multifactorial, adaptive, dynamic, and contextual perspective (Fonseca-Pedrero, 2018; Pérez-Álvarez, 2018). A number of points are to be made in this regard.

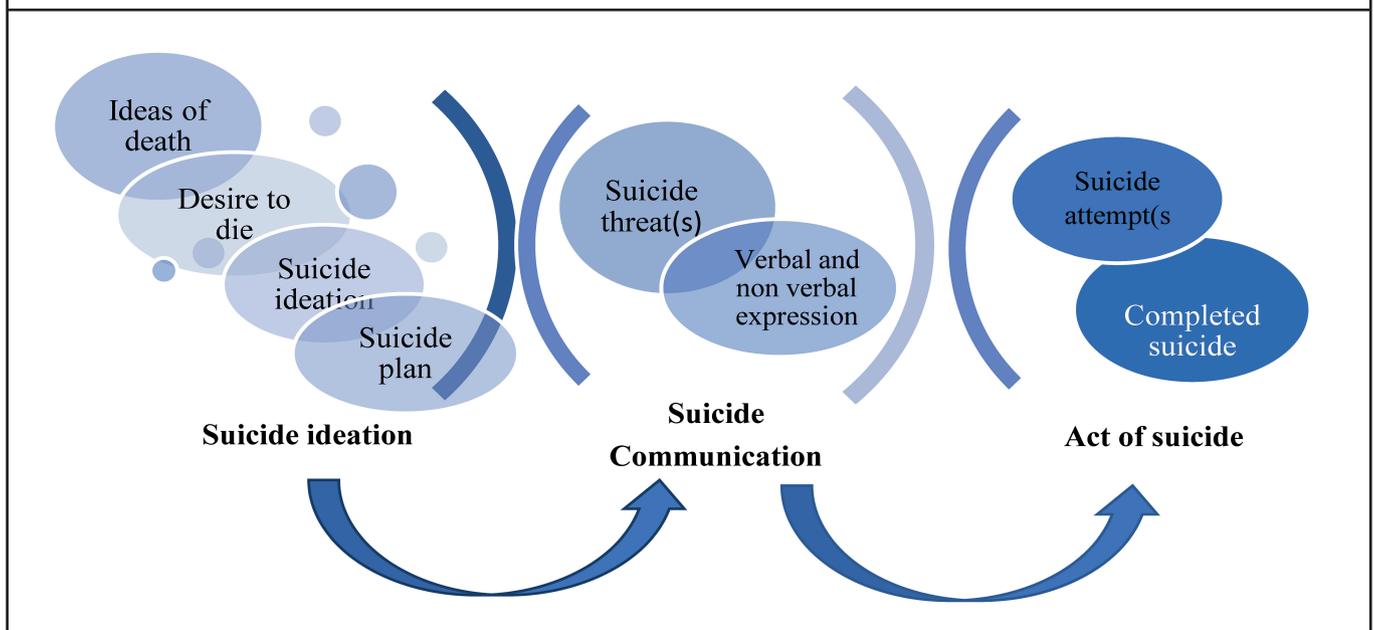
First, it should be borne in mind that psychological knowledge dwells in a narrow epistemological band, with its own entity, which has its roots in the neurobiological hardware and expands its branches in the socio-cultural context. For this reason, the study of human behavior walks with caution, always threatened by two tyrannies, two reductionisms: the neurobiological and the socio-cultural.

Second, human behavior is multicausal, not unicausal. Let's be clear; a psychological experience such as suicidal behavior can never be explained by analyzing a neurochemical change at the brain level (Pérez-Álvarez, 2018; Pérez-Álvarez, 2011). The phenomenon of suicide is multi-determined, that is, caused by multiple factors. Therefore, simplistic or unicausal explanations must be rejected. In essence, in order to understand human behavior, and particularly the case at hand, the psychology practitioner must use more behavior (understanding the reasons and motives) and less brain.

Third, it is assumed that two people can develop the same suicidal behavior through different etiological mechanisms (called equifinality). Similarly, the same causal mechanisms can lead to different types of suicidal behavior (called multifinality). Heterogeneity in explaining suicidal behavior is the rule, not the exception. In fact, the causal mechanisms by which a person, in this case a young person, carries out a suicide attempt or ends up in a completed suicide are, at the moment, poorly understood (Cha et al., 2018).

Fourth, as mentioned above, there are a multitude of etiological models that attempt to give a good account of the possible causes underlying suicidal behavior. Within this area

**FIGURE 1**  
**EXPRESSIONS, ACCORDING TO THEIR NATURE, OF SUICIDAL BEHAVIOR**  
 (MODIFIED FROM ANSEÁN, 2014 AND FONSECA-PEDRERO ET AL., 2019)





of study, the integrated motivational/volitional model (O'Connor, Platt, & Gordon, 2011) and interpersonal theory (Van Orden et al., 2010) have been widely accepted. However, each of them explicitly or implicitly is based, in essence, on the classic model of vulnerability-stress.

Fifth, new approaches attempt to conceive of suicidal behavior as a complex dynamic system. From this point of view, network models (Borsboom, 2017; Borsboom & Cramer, 2013), allow us to understand these psychological phenomena as dynamic constellations of mental states (or symptoms, signs, traits, experiences, etc.) that are causally interrelated, that is, connected through systems of causal relationships. This approach is presented as a new and different way with which to analyze and model psychological phenomena such as suicide. It moves away from the traditional biomedical view that considers symptoms as manifestations of an underlying disorder or a common latent cause (Fonseca-Pedrero, 2017; 2018) (tautological reasoning that leads to reification, among other aspects), and it is also congruent with the most current models of suicidal behavior (O'Connor & Portzky, 2018). Based on the network model, it is understood that each person has his or her own network that may or may not lead to a certain type of suicidal behavior, depending on their own intra- and inter-state mental interaction, the environmental stress load (environmental impacts, daily events, etc.), and the existing predisposition (degree of resilience). Consequently, for example, the same levels of rumination and sleep disturbance could result in suicidal behavior in one person, while they might not result in suicidal intent in a different person. Figure 2 presents a network model of suicidal behavior, mental health, and emotional well-being in adolescents. This approach allows for a more detailed appreciation of suicidal behavior and, therefore, could usefully contribute to the refinement of existing explanatory models in this field.

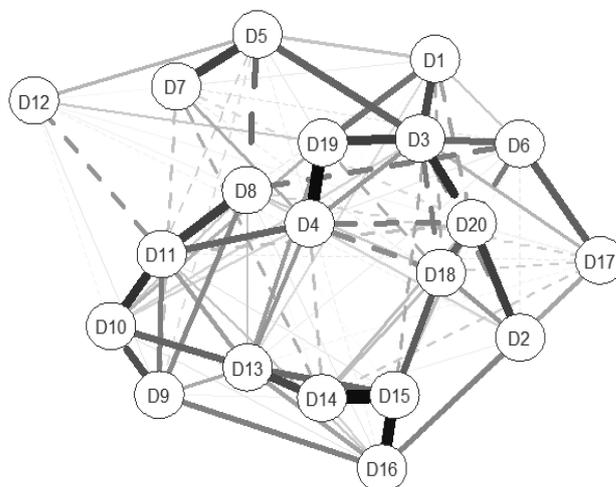
Sixth, understanding suicidal behavior involves recognizing the existence of risk and protective factors, as well as precipitating factors. A broad amalgamation of risk and protective factors has been proposed in the previous literature (Castellvi-Obiols & Piqueras, 2018; Franklin et al., 2017; Hawton, Saunders, & O'Connor, 2012; O'Connor & Nock, 2014; O'Connor & Pirkis, 2016; Turecki & Brent, 2016). However, the reader should be aware that a recent meta-analysis seems to question the scientific validity of many of these risk factor taxonomies (Franklin et al., 2017). According to Franklin et al. the prognostic and predictive capacity of the risk factors of suicidal behavior and ideation is very limited. In addition, they argue that while the guidelines are likely to be useful in some way, there is much room for improvement, since most of them are extensive lists of relatively nonspecific factors, which could be present in any other type of person in the general population or in any individual with a mental health problem. In other review papers (Castellví, Lucas-Romero, et al., 2017; Castellví, Miranda-Mendizábal, et al, 2017), it has been observed that in the youth population the factors associated with the highest risk were as follows, in

order (here only some of them are mentioned): having a previous mood disorder, previous suicide attempt, dropping out of school, having an alcohol or other substance use disorder, suicidal ideation, school absenteeism, having a family history of previous suicide attempt(s), presence of an anxiety disorder, and being a victim of bullying. All of these are potentially modifiable risk factors, and, with proper identification and intervention, suicide cases could be substantially reduced and/or cases of at-risk youth improved.

**EVALUATION OF SUICIDAL BEHAVIOR**

The psychological evaluation of suicidal behavior is central to decision making. Without a correct assessment and diagnosis, it is difficult to carry out an accurate intervention. An adequate assessment is therefore fundamental in providing quality care to individuals and their families. The assessment aims to identify and detect the risk of suicide with the purpose of implementing effective intervention measures (if the case requires it). Obviously, a correct assessment requires not only that the psychologist has appropriate training (e.g., skills), but also that he or she has adequate instruments with

**FIGURE 2  
EXAMPLE OF AN ESTIMATED PSYCHOLOGICAL NETWORK OF  
MENTAL HEALTH AND SUICIDAL BEHAVIOR IN A SAMPLE OF  
ADOLESCENTS**



Note: Por estilo de maquetación, se presenta la figura en blanco y negro. The nodes (circles) correspond to the tests administered (total score) and/or their subscales (or dimensions). The edges (or lines) are the degree of association between nodes. The thicker the line, the greater the relationship between nodes. Línea continua (no punteada) relación positiva entre nodos. El grosor de la arista indica la fuerza de la asociación. El lector que desee tener la figura en color la puede solicitar a los autores del trabajo.  
D1= Suicidal Behavior; D2= Emotional well-being; D3= Symptoms of depression; D4= Emotional problems; D5= Behavior problems; D6= Peer problems; D7= Hyperactivity; D8= Prosocial behavior; D9= Gaining perspective (empathy); D10= Fantasy (empathy); D11= Empathic concern; D12= Personal discomfort (empathy); D13= Emotional attention (emotional intelligence); D14= Emotional clarity; (emotional intelligence); D15= Emotional repair (emotional intelligence); D16= Cognitive reappraisal (emotional regulation strategy); D17= Suppression (emotional regulation strategy); D18= Positive affect, D19= Negative affect; D20= Self-esteem.



psychometric properties, constructed and adapted according to international standards, validated for a specific use, population and context, and with appropriate norms (Hernández, Ponsoda, Muñiz, Prieto, & Elosua, 2016; Muñiz & Fonseca-Pedrero, 2019). Excellent reviews of the instruments available in the market for the assessment of suicidal behavior can be found in the previous literature (Anseán, 2014; Batterham et al., 2015; *Ministerio de Sanidad Política Social e Igualdad* [Ministry of Health, Social Policy and Equality], 2011; O'Connor & Pirkis, 2016; Runeson et al., 2017).

Needless to say, the evaluation process is intrinsically linked to the psychological models of suicidal behavior. Assessment needs to be holistic and person-centered, and it must gather information from a variety of sources (e.g., objective and subjective), informants (e.g., the individual, peers, family members, teachers, etc.), and through different methods (e.g., self-reporting, interviews). Possible risk, protective and precipitating factors, as well as mental health status (psychopathological examination) must be taken into account as they are a fundamental source to guide the subsequent intervention. The practitioner should carry out an assessment of these factors by selecting the instruments according to the variables involved in each case (e.g. bullying, depressive disorders, substance use, etc.). It should be borne in mind that adequate evaluation is important in the initial phases, but it is even more important in the phases of monitoring and follow-up of the case. According to the Zero Suicide Model, it is a cyclical process of assessment, intervention, and monitoring (Brodsky, Spruch-Feiner, & Stanley, 2018; Labouliere et al., 2018). For further information on the evaluation process, factors to be considered, ways to proceed, etc., we refer the reader to the *Guía de Práctica Clínica de Prevención y Tratamiento de la Conducta Suicida* [Clinical Practice Guide for the Prevention and Treatment of Suicidal Behavior] (Ministerio de Sanidad Política Social e Igualdad [Ministry of Health, Social Policy and Equality], 2011).

Among the existing instruments, the *Columbia-Suicide Severity Rating Scale* (C-SSRS) can be of great help to the psychologist (Posner et al., 2011). The C-SSRS, which is available online<sup>1</sup>, is a semi-structured interview, fairly simple to apply, that captures the occurrence, severity, and frequency of suicidal behavior and thoughts during the assessment period and measures four constructs: severity of ideation, intensity of ideation, suicidal behavior, and lethality of suicidal behavior. The evaluation of these aspects in the interview is a very useful guide for psychologists to gather key information in making decisions about the appropriateness of referral to specialized mental health services, to perform a more thorough psychological exploration, and/or to establish treatment goals in an intervention. The C-SSRS has been validated in Spanish (Al-Halabí et al., 2016). The psychometric results seem to

indicate that it is an adequate instrument for the evaluation and monitoring of suicidal behavior and ideation in clinical practice and research. In our view, it is also a tool of great interest for use in other contexts such as, for example, the educational environment.

In short, it is of utmost importance to carry out a comprehensive assessment of suicidal behavior, understanding the role it plays in the individual's particular context, the particular barriers stopping them from actually committing suicide, and the trigger points that activate this behavior.

### PAYKEL SUICIDE SCALE

In addition, of all the existing instruments for the assessment of suicidal behavior -or suicidal risk- the Paykel Suicide Scale should be highlighted. The PSS is a tool originally designed for the evaluation of the different manifestations of suicidal behavior in a clinical population (e.g., thoughts of death, suicidal ideation, and suicide attempts). It consists of a total of five items with a dichotomous Yes/No response system (scores 1 and 0, respectively) (see Table 1). Higher scores indicate greater severity at the theoretical level. The time frame refers to the last year. The PSS has been validated in Spanish adolescents (Fonseca-Pedrero et al., 2018). As can be seen, it has the advantage of being simple and brief, which is of great interest considering the time constraints in the applied areas. Basically, the PSS can be used as an assessment instrument or as a screening tool for suicidal behavior in different assessment settings (e.g., educational, healthcare, or social settings).

The Spanish version of the Paykel Scale has been analyzed in two representative samples of adolescents from La Rioja, selected by means of a stratified cluster sampling. The sampling was carried out in the years 2016 and 2019. A total of 3,454 adolescents participated, 46.3% men ( $n=1,598$ ) and 53.4% ( $n=1843$ ) women, aged between 14 and 19 years ( $M=15.91$  years,  $SD=1.33$  years). A total of 13 participants (0.4%) were identified within another category of affective-sexual diversity. In each year of administration, more than 35 educational centers and almost 100 classrooms participated. The first sample included 1,664 participants ( $M = 16.12$  years;  $SD = 1.36$  years), 53% of whom were female. The second sample included 1,790 students ( $M = 15.70$  years;  $SD = 1.26$  years), 53.7% of whom were female. To guarantee the validity of the response process, using the Oviedo Infrequency Response Scale, we eliminated participants if they presented a random or pseudo-random response pattern (Fonseca-Pedrero, Lemos-Giráldez, Paino, Villazón-García, & Muñiz, 2009).

The results of suicidal behavior prevalence for the total sample and by gender are shown in Table 2. Females showed significantly higher mean scores than males on the total Paykel Scale score ( $M_{male}=0.56$ ,  $SD_{male}=1.10$ ;  $M_{female}=0.86$ ,  $SD$

<sup>1</sup> <https://cssrs.columbia.edu/wp-content/uploads/C-SSRS-SinceLastVisit-US-Spanish-5.1-2.pdf>



$r_{female}=1.13$ ;  $p<0.011$ ,  $d=0.26$ ). The effect size, according to Cohen's  $d$ , was small. No statistically significant differences were found in the total PSS score according to age groups. Figure 3 shows the distribution of the PSS total score for the total sample. As can be seen, 2.1% of the sample scored five points on the PSS ( $n= 72$  participants) and 5.3% had scores equal to or greater than 4 points ( $n= 183$  participants).

With respect to the psychometric properties, the exploratory and confirmatory factor analyses yielded an essentially one-dimensional structure. All estimated factor loads were greater than 0.30. Using the SIBTEST procedure with the *R diffr* package, item 4 showed differential functioning (uniform type) according to gender, an aspect that guarantees, to some extent, equity in the measurement process with this scale. The PSS scores showed adequate levels of reliability. The Omega value for the total sample was 0.82. The test-retest reliability, with a 3-month interval, in the total PSS score was 0.61 ( $n= 386$  adolescents, 51.1% women; age range= 13-19 years,  $M= 14.03$  years;  $SD= 0.57$  years). All discrimination rates were higher than 0.30. The accuracy of the scores was estimated from the perspective of item response theory (Muniz, 2017). Figure 4 shows the test information function. As can be seen, the greatest degree of accuracy in estimating suicidal behavior in this sample was in values of the latent trait ranging from 1 to 2. In this sense, for the extreme values of the latent trait (see Suicidal Behavior) the precision levels were optimal

and, therefore, it was estimated at the score with the least measurement error.

Validity evidence was also obtained in relation to external variables. The self-reported version of the Skills and Difficulties Questionnaire was used for the assessment of emotional and behavioral difficulties (Goodman, 1997). Depressive symptoms were assessed through the Reynolds Adolescent Depression Assessment Scale: Short Form (Reynolds, 2002). The Personal Well-Being Index-school children (Cummins & Lau, 2005), the Rosenberg Self-Esteem Scale (Rosenberg, 1965), and the MDS3 Questionnaire were also used to assess the sense of belonging at school (Bradshaw, Waasdorp, Debnam, & Johnson, 2014). Finally, for the evaluation of attenuated psychotic experiences, the Prodromal Questionnaire - Brief version for assessing psychosis was used (Loewy, Pearson, Vinogradov, Bearden, & Cannon, 2011). Using the second subsample of participants, the PSS scores were positively associated with symptoms of depression, and emotional and behavioral problems, as well as attenuated psychotic experiences. On the other hand, the PSS scores were negatively correlated with scales that assessed self-esteem, emotional well-being, sense of belonging at school, and prosocial behavior. The results are presented in Table 3.

The Paykel Scale was developed taking into account the statistically significant differences found according to gender. Table 4 shows the percentile scales for the total sample, as well as for males and females.

TABLE 1 PAYKEL SUICIDE SCALE		
Paykel Please mark with a cross the box that you think best fits what you have felt or experienced in the <b>last year</b>		
1. Have you felt that life is not worth living?	Yes	No
2. Have you wished you were dead? For example, going to sleep and wishing you would not get up.	Yes	No
3. Have you thought about taking your life even if you weren't really going to?	Yes	No
4. Have you reached the point where you considered actually taking your own life or you made plans about how you would do it?	Yes	No
5. Have you tried to take your own life?	Yes	No

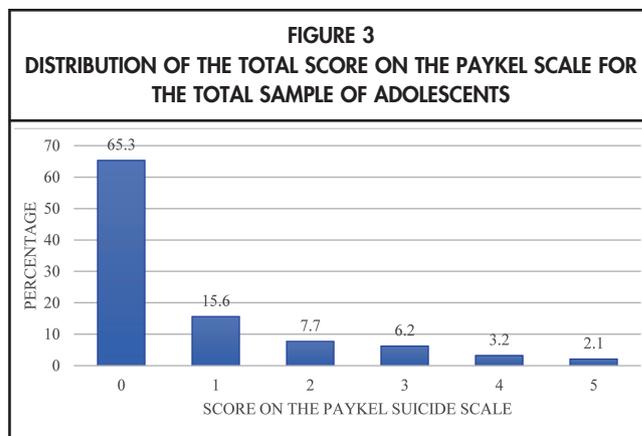


TABLE 2 PREVALENCE (%) OF SUICIDAL BEHAVIOR IN THE TOTAL SAMPLE OF ADOLESCENTS			
Item	Total	Men	Women
Have you felt that life is not worth living?	26.7	21.7	30.9
Have you wished you were dead? For example, going to sleep and wishing you would not get.	18.7	13.1	23.4
Have you thought about taking your life even if you weren't really going to?	17.8	14.6	20.3
Have you reached the point where you considered actually taking your own life or made plans about how you would do it?	5.9	4.8	6.7
Have you tried to take your own life?	3.7	2.4	4.8



**RECAPITULATION**

Suicidal behavior is a public health problem both because of its prevalence and because of the personal, family, educational, and social-health consequences it entails. In order to prevent this problem, it is necessary to inform, train, raise awareness, and sensitize the different actors in society (young people, families, teachers, journalists, psychologists, etc.). In particular, in the case of psychology, it is necessary to have adequate assessment tools that allow for informed decisions to be made that will ultimately affect people's quality of life. Faced with this situation, there are not many measurement tools in Spain that allow the assessment of suicidal behavior in adolescents, and which have been constructed (or adapted), validated, and scaled according to national and international standards proposed by the test commissions. It is well known that if the psychology

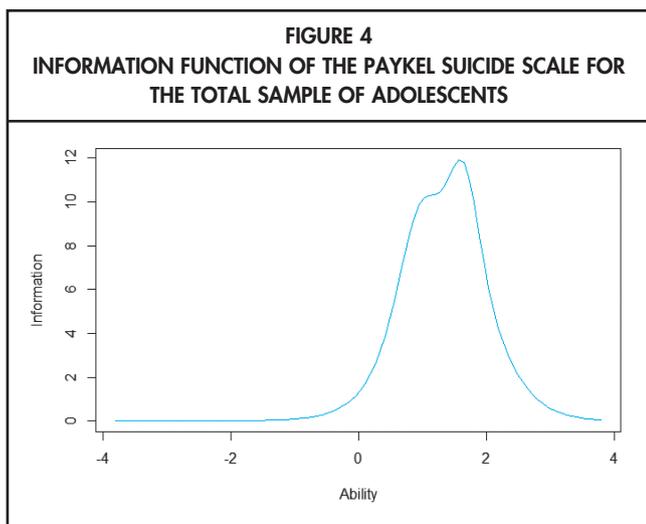
professional has tools with adequate psychometric properties (reliability, evidence of validity, scale, etc.) this will help him or her in the tasks of assessment, detection, and identification, diagnosis, treatment, and follow-up, among other aspects. It is also important that the psychology practitioner has adequate measurement tools for better management of the educational and social health resources. Thus, after a conceptual review, this paper has presented the Paykel Suicide Scale (Paykel et al., 1974) for use with Spanish adolescents.

The Paykel Scale appears to be a short, simple, useful instrument with adequate psychometric properties for the assessment and/or screening of suicidal behavior in the adolescent population. Its reduced number of items makes it an interesting scale to use as a screening tool in the general population or in circumstances where time and/or material resources are scarce (e.g., applied field). The Paykel Scale can be used in combination with other measurement instruments, which allows for the collection of information on suicidal behavior, even when this is not the core objective of the assessment. This tool can also be used in general psychopathological examination. It should be borne in mind that test items that measure suicidal behavior are often associated with stigma and may create some discomfort in young people. For this reason, the brevity and content of the items also make the Paykel Scale a valuable instrument. This tool can also be used in educational, socio-healthcare, and/or social contexts. Basically, it aims to collect reliable and valid information about the different manifestations of suicidal behavior in order to make decisions, such as designing psychological and/or educational interventions or detecting suicidal risk with the purpose of carrying out a more comprehensive psychological evaluation.

**TABLE 3**  
**PEARSON'S CORRELATION BETWEEN THE PAYKEL SCALE AND OTHER PSYCHOMETRIC INDICATORS IN THE SECOND SUBSAMPLE OF ADOLESCENTS**

	Paykel
Self-esteem	-0.531**
Emotional well-being	-0.527**
Prosocial Behavior	-0.109**
Sense of belonging at school	-0.173**
Emotional problems	0.442**
Behavioral problems	0.249**
Problems with peers	0.387**
Hyperactivity	0.195**
Symptoms of depression	0.643**
Diminished psychotic experiences	0.402**

\*\*p<0.05



**TABLE 4**  
**NORMS OF THE PAYKEL SUICIDE SCALE IN THE TOTAL SAMPLE OF ADOLESCENTS**

Percentiles	Total sample	Males	Females
1	0	0	0
5	0	0	0
10	0	0	0
20	0	0	0
30	0	0	0
40	0	0	0
50	0	0	0
60	0	0	0
70	1	0	1
80	1	1	2
90	3	2	3
95	4	3	4
99	5	5	5



Psychology professionals and the various actors have a responsibility to prevent suicide. In the youth population, the role of those working with this sector of the population is particularly important; however, this responsibility is limited by our knowledge, skills, and tools. Learning to assess suicidal behavior involves, among other things, understanding the phenomenon of suicide, the risk and protective factors, the possible causes and warning signs, as well as being prepared to initiate assessment or treatment and knowing the routes for referral if necessary. Psychology has intervention measures and effective resources for prevention, although more work is needed. The response must be comprehensive, inclusive, accessible, holistic, multi-component and multidisciplinary, and, above all, based on the individual and his/her biography. Attention must be paid, and a response provided to combat this preventable problem. The involvement of all actors in society is essential. Psychology cannot be detached from this reality; it has to assume its priority role in this responsibility.

#### ACKNOWLEDGMENTS

The authors would like to express their sincere thanks to Professor Susana Al-Halabi for her excellent comments on a preliminary version of this paper.

This research has been financed by the «BBVA Foundation Grants for Scientific Research Teams 2017» and co-financed with EDRF funds within the EDRF Operating Programme for La Rioja 2014-2020 (SRS 6FRSABC026).

#### CONFLICT OF INTEREST

There is no conflict of interest.

#### REFERENCES

- Al-Halabí, S., Sáiz, P. A., Burón, P., Garrido, M., Benabarre, A., Jiménez, E., ... Bobes, J. (2016). Validación de la versión en español de la Columbia-Suicide Severity Rating Scale [Escala Columbia para Evaluar el Riesgo de Suicidio] [Validation of the Spanish version of the Columbia-Suicide Severity Rating Scale (Columbia Scale to Assess Suicide Risk)]. *Revista de Psiquiatría y Salud Mental*, *9*, 134–142. <https://doi.org/10.1016/j.rpsm.2016.02.002>
- Anseán, A. (2014). *Suicidios: manual de prevención, intervención y postvención de la conducta suicida [Suicides: manual of prevention, intervention, and postvention of suicidal behavior]*. Madrid: Fundación Salud Mental.
- Batterham, P. J., Ftanou, M., Pirkis, J., Brewer, J. L., Mackinnon, A. J., Beautrais, A., ... Christensen, H. (2015). A systematic review and evaluation of measures for suicidal ideation and behaviors in population-based research. *Psychological Assessment*, *27*, 501–512. <https://doi.org/10.1037/pas0000053>
- Borsboom, D. (2017). A network theory of mental disorders. *World Psychiatry*, *16*, 5–13. doi: 10.1002/wps.20375.
- Borsboom, D., & Cramer, A. O. (2013). Network analysis: an integrative approach to the structure of psychopathology. *Annual Review of Clinical Psychology*, *9*, 91–121. doi: 10.1146/annurev-clinpsy-050212-185608.
- Bousoño, M., Al-Halabí, S., Burón, P., Garrido, M., Díaz-mesa, M., Galván, G., ... Bobes, J. (2017). Uso y abuso de sustancias psicotrópicas e internet, psicopatología e ideación suicida en adolescentes [Use and abuse of psychotropic substances and internet, psychopathology, and suicidal ideation in adolescents] *Adicciones*, *29*, 97–104. <https://doi.org/10.20882/adicciones.811>
- Bradshaw, C. P., Waasdorp, T. E., Debnam, K. J., & Johnson, S. L. (2014). Measuring school climate in high schools: A focus on safety, engagement, and the environment. *Journal of School Health*, *84*(9), 593–604. <https://doi.org/10.1111/josh.12186>
- Brodsky, B. S., Spruch-Feiner, A., & Stanley, B. (2018). The zero suicide model: Applying evidence-based suicide prevention practices to clinical care. *Frontiers in Psychiatry*. *9*:33. <https://doi.org/10.3389/fpsyt.2018.00033>
- Carli, V., Hoven, C. W., Wasserman, C., Chiesa, F., Guffanti, G., Sarchiapone, M., ... Wasserman, D. (2014). A newly identified group of adolescents at “invisible” risk for psychopathology and suicidal behavior: findings from the SEYLE study. *World Psychiatry*, *13*, 78–86. doi: 10.1002/wps.20088.
- Castellvi-Obiols, P., & Piqueras, J. A. (2018). El suicidio en la adolescencia: un problema de salud pública que se puede y debe prevenir [Suicide in adolescence: a public health problem that can and must be prevented]. *Revista de Estudios de Juventud*, *121*, 45–59.
- Castellví, P., Lucas-Romero, E., Miranda-Mendizábal, A., Parés-Badell, O., Almenara, J., Alonso, I., ... Alonso, J. (2017). Longitudinal association between self-injurious thoughts and behaviors and suicidal behavior in adolescents and young adults: A systematic review with meta-analysis. *Journal of Affective Disorders*, *215*, 37-48. <https://doi.org/10.1016/j.jad.2017.03.035>
- Castellví, P., Miranda-Mendizábal, A., Parés-Badell, O., Almenara, J., Alonso, I., Blasco, M. J., ... Alonso, J. (2017). Exposure to violence, a risk for suicide in youths and young adults. A meta-analysis of longitudinal studies. *Acta Psychiatrica Scandinavica*, *135*, 195-211. <https://doi.org/10.1111/acps.12679>
- Catalá-López, F., Gènova-Maleras, R., Álvarez-Martín, E., de Larrea-Baz, N. F., & Morant-Ginestar, C. (2013). Carga de enfermedad en adolescentes y jóvenes en España [Burden of disease in adolescents and young people in Spain]. *Revista de Psiquiatría y Salud Mental*, *6*, 80–85. <https://doi.org/http://dx.doi.org/10.1016/j.rpsm.2012.07.002>
- Cha, C. B., Franz, P. J., M. Guzmán, E., Glenn, C. R., Kleiman, E. M., & Nock, M. K. (2018). Annual Research Review: Suicide among youth – epidemiology, (potential) etiology, and treatment. *Journal of Child Psychology and Psychiatry and Allied Disciplines*, *59*, 460-482. doi: 10.1111/jcpp.12831.



- Cummins, R. A., & Lau, A. L. D. (2005). *Personal Well-being Index – School Children* (3rd Edition).
- Fonseca-Pedrero, E. (2017). Análisis de redes: ¿una nueva forma de comprender la psicopatología? [Network analysis: a new way of understanding psychopathology?] *Revista de Psiquiatría y Salud Mental*, 10(4), 206–215. <https://doi.org/10.1016/j.rpsm.2017.06.004>
- Fonseca-Pedrero, E. (2018). Análisis de redes en psicología [Network analysis in psychology]. *Papeles del Psicólogo*, 39, 1–12.
- Fonseca-Pedrero, E., & Díez, A. (2018). Conducta suicida y juventud: pautas de prevención para familias y centros educativos [Suicidal behavior and youth: prevention guidelines for families and educational centers]. *INJUVE*, 120, 35–46.
- Fonseca-Pedrero, E., Díez, A., Pérez, A., Inchausti, F., Enesco, A., & Pérez, M. (2019). Prevención del suicidio en los centros educativos [Suicide prevention in schools]. In B. Lucas-Molina and M. Jiménez-Dasi (Eds.), *Promoción de la salud a través de programas de intervención en contexto educativo [Health promotion through intervention programs in an educational context]* (pp. 157–184). Madrid: Pirámide.
- Fonseca-Pedrero, E., Inchausti, F., Pérez, L., Aritio, A., Ortuño-Sierra, J., Sánchez-García, A., ... Pérez de Albéniz, A. (2018). Ideación suicida en una muestra representativa de adolescentes españoles [Suicidal ideation in a representative sample of Spanish adolescents]. *Revista de Psiquiatría y Salud Mental*, 11, 76–85. doi: 10.1016/j.rpsm.2017.07.004..
- Fonseca-Pedrero, E., Lemos-Giráldez, S., Paino, M., Villazón-García, U., & Muñiz, J. (2009). Validation of the Schizotypal Personality Questionnaire Brief form in adolescents. *Schizophrenia Research*, 111, 53–60.
- Franklin, J. C., Ribeiro, J. D., Fox, K. R., Bentley, K. H., Kleiman, E. M., Huang, X., ... Nock, M. K. (2017). Risk factors for suicidal thoughts and behaviors: A meta-analysis of 50 years of research. *Psychological Bulletin*, 143(2), 187–232. <https://doi.org/10.1037/bul0000084>
- Goodfellow, B., Kölves, K., & de Leo, D. (2018). Contemporary Nomenclatures of Suicidal Behaviors: A Systematic Literature Review. *Suicide and Life-Threatening Behavior*, 48(3), 353–366. <https://doi.org/10.1111/sltb.12354>
- Goodman, R. (1997). The strengths and difficulties questionnaire: a research note. *Journal of Child Psychology and Psychiatry*, 38, 581–586.
- Gore, F. M., Bloem, P. J., Patton, G. C., Ferguson, J., Joseph, V., Coffey, C., ... Mathers, C. D. (2011). Global burden of disease in young people aged 10–24 years: a systematic analysis. *Lancet*, 18(377), 2093–2102. doi: 10.1016/S0140-6736(11)60512-6..
- Hawton, K., Saunders, K. E. A., & O'Connor, R. C. (2012). Self-harm and suicide in adolescents. *Lancet*, 379(9834), 2373–82. doi: 10.1016/S0140-6736(12)60322-5..
- Hernández, A., Ponsoda, V., Muñiz, J., Prieto, G., & Elosua, P. (2016). Revisión del modelo para evaluar la calidad de los tests utilizados en España [Assessing the Quality of Tests in Spain: Revision of the Spanish Test Review Model]. *Papeles del Psicólogo*, 37, 192–197.
- Labouliere, C. D., Vasan, P., Kramer, A., Brown, G., Green, K., Kammer, J., ... Stanley, B. (2018). «Zero Suicide» – A model for reducing suicide in United States behavioral healthcare. *Suicidologi*, 23, 22–30. <https://doi.org/10.5617/suicidologi.6198>
- Lim, K., Wong, C., McIntyre, R., Wang, J., Zhang, Z., Tran, B., ... Ho, R. (2019). Global Lifetime and 12-Month Prevalence of Suicidal Behavior, Deliberate Self-Harm and Non-Suicidal Self-Injury in Children and Adolescents between 1989 and 2018: A Meta-Analysis. *International Journal of Environmental Research and Public Health*, 16,, doi: 10.3390/ijerph16224581.
- Loewy, R. L., Pearson, R., Vinogradov, S., Bearden, C. E., & Cannon, T. D. (2011). Psychosis risk screening with the Prodromal Questionnaire—brief version (PG-B). *Schizophrenia Research*, 129, 42–46. doi: 10.1016/j.schres.2011.03.029.
- Ministerio de Sanidad Política Social e Igualdad [Ministry of Health, Social Policy, and Equality], (2011). *Guía de Práctica Clínica de Prevención y Tratamiento de la Conducta Suicida. I. Evaluación y Tratamiento. [Clinical Practice Guide to Suicidal Behavior, Prevention, and Treatment. I. Evaluation and Treatment.]* Madrid: autor:
- Miranda-Mendizabal, A., Castellví, P., Parés-Badell, O., Alayo, I., Almenara, J., Alonso, I., ... Alonso, J. (2019). Gender differences in suicidal behavior in adolescents and young adults: systematic review and meta-analysis of longitudinal studies. *International Journal of Public Health*, 64, 265–283. <https://doi.org/10.1007/s00038-018-1196-1>
- Muñiz, J. (2017). *Introducción a la psicometría [An introduction to psychometrics]*. Madrid: Pirámide.
- Muñiz, J., & Fonseca-Pedrero, E. (2019). Diez pasos para la construcción de un test [Ten steps for the construction of a test.]. *Psicothema*, 31, 7–16. doi: 10.7334/psicothema2018.291
- Muñiz, J., Hernández, A., & Fernández-Hermida, J. R. (2020). Utilización de los test en España: el punto de vista de los psicólogos [The opinion of Spanish psychologists on the use of tests]. *Papeles del Psicólogo*.
- Murray, C. J. L., Vos, T., Lozano, R., Naghavi, M., Flaxman, A. D., Michaud, C., ... Lopez, A. D. (2012). Disability-adjusted life years (DALYs) for 291 diseases and injuries in 21 regions, 1990–2010: A systematic analysis for the Global Burden of Disease Study 2010. *Lancet*, 380(9859), 2197–223. [https://doi.org/10.1016/S0140-6736\(12\)61689-4](https://doi.org/10.1016/S0140-6736(12)61689-4)
- O'Connor, R. C., & Nock, M. K. (2014). The psychology of suicidal behaviour. *The Lancet Psychiatry*, 1, 73–85. [https://doi.org/10.1016/S2215-0366\(14\)70222-6](https://doi.org/10.1016/S2215-0366(14)70222-6)
- O'Connor, R. C., Platt, S., & Gordon, J. (2011). *International Handbook of Suicide Prevention Research, Policy and Practice*. UK: John Wiley & Sons, Ltd.
- O'Connor, R. C., & Portzky, G. (2018). Looking to the future:



- A synthesis of new developments and challenges in suicide research and prevention. *Frontiers in Psychology*, 9. <https://doi.org/10.3389/fpsyg.2018.02139>
- O'Connor, R., & Pirkis, J. (2016). *The International Handbook of Suicide Prevention (Second edition)*. Hoboken: Wiley.
- OMS [WHO] (2014). Prevención del suicidio, un imperativo global: Epidemiología mundial del suicidio y de los intentos de suicidio [Original title in English: Preventing suicide: a global imperative]. Geneva: Author.
- Paykel, E. S., Myers, J. K., Lindenthal, J. J., & Tanner, J. (1974). Suicidal feelings in the general population: A prevalence study. *The British Journal of Psychiatry*, 214, 460–469.
- Pérez-Álvarez, M. (2018). Para pensar la psicología más allá de la mente y el cerebro: un enfoque transteórico [Thinking psychology beyond the mind and the brain: A trans-theoretical approach]. *Papeles del Psicólogo*, 39, 161–173.
- Pérez-Álvarez, M. (2011). *El mito del cerebro creador. Cuerpo, conducta y cultura [The myth of the creative brain. Body, behavior, and culture]*. Madrid: Alianza Editorial.
- Posner, K., Brown, G. K., Stanley, B., Brent, D. A., Yershova, K. V., Oquendo, M. A., ... Mann, J. J. (2011). The Columbia-suicide severity rating scale: Initial validity and internal consistency findings from three multisite studies with adolescents and adults. *American Journal of Psychiatry*, 168, 1266–1277. doi: 10.1176/appi.ajp.2011.10111704.
- Reynolds, W. M. (2002). *Reynolds Adolescent Depression Scale – 2nd Edition. Professional manual*. Odessa: Psychological Assessment Resources, Inc.
- Rosenberg, M. (1965). *Society and adolescent self-image*. Princeton: University press.
- Runeson, B., Odeberg, J., Pettersson, A., Edbom, T., Jildevik Adamsson, I., & Waern, M. (2017). Instruments for the assessment of suicide risk: A systematic review evaluating the certainty of the evidence. *PloS One*, 12(7):e0180292. <https://doi.org/10.1371/journal.pone.0180292>
- Turecki, G., & Brent, D. A. (2016). Suicide and suicidal behaviour. *The Lancet*, 387(10024), 1227–39. doi: 10.1016/S0140-6736(15)00234-2
- Van Orden, K. A., Witte, T. K., Cukrowicz, K. C., Braithwaite, S. R., Selby, E. A., & Joiner, T. E. (2010). The Interpersonal Theory of Suicide. *Psychological Review*, 117, 575–600. doi: 10.1037/a0018697
- Xifró, A., Suelves, J. M., Martín-Fumadó, C., & Gómez-Durán, E. L. (2015). Suicides and forensic pathology sources in Spain. *Revista de Psiquiatría y Salud Mental*, 8, 46–47. <https://doi.org/10.1016/j.rpsmen.2015.03.006>
- Zalsman, G., Hawton, K., Wasserman, D., van Heeringen, K., Arensman, E., Sarchiapone, M., ... Zohar, J. (2016). Suicide prevention strategies revisited: 10-year systematic review. *The Lancet Psychiatry*, 3, 646–659. [https://doi.org/10.1016/S2215-0366\(16\)30030-X](https://doi.org/10.1016/S2215-0366(16)30030-X)

