Journal Article

Critique the assigned article from the journal of obstetric, gynecologic, & neonatal nurses (jognn). Critique the article in 1000 typed words or less. Must include (20 points each):

1. Objective_____
2. Design/instrument_____
3. Setting and participants_____
4. Outcome measure_____
5. Conclusion (In own words)_____

You will receive your article on March 7, 2022. Please print article from book and returned book to me BEFORE you leave campus (Failure to do so will result in 5 points being deducted for each day. This assignment is MANDATORY to complete clinical). This assignment is due on April 4, 2022 for ALL GROUPS by 0001to receive credit. *Must be in APA format to receive full credit.

How to critique a journal article

1. Title page must include: Running head, title, student name, class, date, instructor name.
2. Citation of article noted on second page above title: See Below

Lee, O., Maerten-Rivera, J., Penfield, R.D., LeRoy, K. & Secada, W.G. (2008). Science achievement of English language learners in urban elementary schools: Results of a first year professional development intervention. *Journal of Research in Science Teaching, 45,* 31-52. doi:10.1002/tea.20209

Objective

1. Is there a statement of the objective?
2. Is the objective "researchable"? That is, can it be investigated through the collection and analysis of data?
3. Is background information on the objective presented?
4. Is the educational significance of the objective discussed?

Participants (sample) and setting

1. Describe the sample used; is the size and major characteristics of the population studied described?
2. If a sample was selected, is the method of selecting the sample clearly described?
3. Is the method of sample selection described one that is likely to result in a representative, unbiased sample?
4. Are the size and major characteristics of the sample described?
5. Was the setting appropriate enough to result in a representative, unbiased sample?

Instrument

1. Describe the instrument (s) used.
2. Is the rationale given for the selection of the instrument(s) used?
3. Is each instrument described in terms of purpose and content?
4. Are the instruments appropriate for measuring the intended variables?
5. Is evidence presented that indicates that each instrument is appropriate for the sample under study?
6. Is instrument validity discussed and coefficients given if appropriate?
7. Is reliability discussed in terms of type and size of reliability coefficients?
8. If an instrument was developed specifically for the study, are the procedures involved in its development and validation described?
9. How was the data analyzed?

Design

1. Describe the type of design used?
2. Is the design used appropriate for the study? If not, what design would have been more appropriate?
3. Is the design appropriate for answering the questions or testing the hypotheses of the study?

Conclusion

In your own words discuss results, recommendations, and how the study will benefit nursing.

*Paper must be in APA format

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RESEARCH

Evaluation of the Perinatal Grief Intensity Scale in the Subsequent Pregnancy After Perinatal Loss

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Keywords
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ABSTRACT

Objectives: To evaluate the reliability and validity of the Perinatal Grief Intensity Scale (PGIS) for identifying a woman's grief intensity in the immediate subsequent pregnancy after a miscarriage, stillbirth, or neonatal death.

Design/Setting/Participants: A web-based approach was used to collect data from 227 pregnant women after each woman had experienced a perinatal loss in her previous pregnancy.

Methods: Participants completed a demographic information form and the 14-item PGIS.

Results: Cronbach's alphas for the PGIS total scale and subscales were high: 0.75 (PGIS total), 0.80 (Reality), 0.82 (Confront Others), and 0.80 (Congruence), which indicated good internal consistency reliability. Validity was supported by factor analysis of the PGIS, which accounted for 66.94% of the total variance. Mothers in the neonatal death group experienced more intense grief, as measured by the PGIS, when compared with mothers in the miscarriage or stillbirth groups.

Conclusions: Data from this study provided initial support for the reliability and validity of the PGIS in women in their immediate subsequent pregnancies after perinatal loss as well as the concepts of the grief intensity theoretical framework.

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The purpose of this study was to evaluate the reliability and validity of the Perinatal Grief Intensity Scale (PGIS) for identifying the intensity of a woman's grief in the subsequent pregnancy after a miscarriage, stillbirth, or neonatal death. Miscarriage, stillbirth, and neonatal death represent early pregnancy, late pregnancy, and postpregnancy losses, respectively. They occur in approximately 25% of all pregnancies, and when considered together they are called perinatal loss (Hutti, Armstrong, & Myers, 2011). The mental health consequences of perinatal loss are significant, common, and well documented (Lang, Fleiszer, Duhamel, Sword, Gilbert, & Corsini-Munt, 2011; Woods-Giscombé, Lobel, & Crandell, 2010). Beyond expected normal grieving, mothers may experience high levels of anxiety (Armstrong, Hutti, & Myers, 2009; Gaudet, Séjourné, Camborieux, Rogers, & Chabrol, 2010; Woods-Giscombé et al.), depression (Gaudet et al.; Gausia, Moran, Ali, Ryder, Fisher, & Koblinsky, 2011; Swanson, Hsien-Tzu, Graham, Wojnar, & Petras, 2009; Sutan et al., 2010), posttraumatic stress (Armstrong et al., 2009; Jind, 2003), and marital discord and divorce (Gausia et al.; Gold, Sen, & Hayward, 2010; Lang et al.). For some grieving parents, the mental health consequences of perinatal loss may last many years (Schaap et al., 1997).

In the only study of conception rates after a previous loss, Cuisinier, Janssen, deGraaw, Bakker, and Hoogduin (1996) found 86% of parents became pregnant again within 18 months. However, the mental health consequences of a previous perinatal loss often do not resolve with the birth of a subsequent healthy infant (Blackmore et al., 2011). Many parents will continue to grieve previous losses during the next pregnancies and will continue to experience high levels of anxiety (Armstrong et al., 2009; Couto et al., 2009; Hutti et al., 2011; Woods-Giscombé, et al., 2010), depression (Couto et al.; Armstrong et al., 2009; Hutti et al., 2011) and posttraumatic stress (Armstrong, et al., 2009; O'Leary, 2005). Increased use of health care resources during the

Identification of parents who may experience intense grief and need for follow-up cannot be accurately determined by parental behavior soon after a perinatal loss.

subsequent pregnancy (Hutti et al.; Robson, Leader, Bennett, & Dear, 2010) and increased postpartum depression after delivery of the subsequent healthy infant (Armstrong, 2007; Blackmore et al.) are also common.

However, not all parents who have a perinatal loss will experience a grief reaction (Hutti, 1992). The presence of grief is mediated by the presence of prenatal attachment (Côté-Arsenault & Dombeck, 2001; Hutti; Uren & Wastell, 2002). According to Hutti, attachment occurs initially as the idea of the pregnancy becomes a reality for the parents; once that occurs, the fetus becomes real to them. Côté-Arsenault and Dombeck (2001) designated this as a process of assigning personhood to the fetus. Parents become prenatally attached over time as they perceive specific characteristics and a personality in their unborn infants (Hutti). Mothers and fathers often accomplish this process at different rates. The mother has early pregnancy symptoms that usually help make the pregnancy and fetus a reality for her sooner than for the father. Once an attachment has formed and a loss occurs, a grief reaction will follow (Hutti; Shreffler, Greil, & McQuillan, 2011). If parents have not yet become attached to the fetus and a loss occurs, they may not experience a grief reaction (Hutti). Therefore, the loss may be perceived as something other than the death of a child, and the typical hospital interventions used by maternity nurses after a perinatal loss may be inappropriate (e.g., suggesting a funeral or memorial service; naming the deceased fetus).

Accurately identifying parents who are grieving and need follow-up from those who are not grieving may be difficult in the early hours or days after perinatal loss. Parents respond to the diagnosis of a perinatal loss in ways that vary widely. Some are immediately responsive and may grieve openly. Others may experience little or no grief but may be very frightened about the bleeding and pain they or their partner is experiencing. Still others may grieve and experience a phase of shock and numbness in the first hours to days after a perinatal loss, during which they may not demonstrate or express their grief to health care providers (Hutti, 1992; Rowlands & Lee, 2010). They may not move out of this phase of shock and numbness until after hospital discharge, which makes it difficult to use their behavior as a guide for need for follow-up by health care providers. An instrument that could identify parents at greatest risk of intense grief after a perinatal loss and therefore, with greatest need for follow-up, would be very helpful to obstetric providers.

Theoretical Framework for the Perinatal Grief Intensity Scale

The theoretical framework for the PGIS was based on Dougherty's model of cognitive representation (1984) and developed for use in a perinatal loss population based on a qualitative study conducted by Hutti (1992). The theoretical framework assists clinicians to better anticipate which parents may be most likely to experience intense grief and need for follow-up after perinatal loss.

The theoretical framework explains the relationship between the parents' perceptions of the event of perinatal loss and their behavior subsequent to the loss. The framework is based on the assumption that the most critical influence of parents' behavior and actions after a perinatal loss is how the mother or father perceived the experience of the loss, rather than the actual facts surrounding the event. In the development of the theoretical framework, Hutti (1992) found three factors influenced grief intensity after pregnancy loss: (a) perceived reality of the pregnancy and infant, (b)congruence between the experience of the actual loss and the parents' standard of the desirable (or perceived ideal against which the experience is being evaluated), and (c) the ability of parents to make decisions or act in ways to increase this congruence.

Reality of the Pregnancy and Infant

According to Hutti's framework (1992), prenatal attachment begins when the pregnancy and fetus become real to the parents. If parents experience a miscarriage, stillbirth, or neonatal death after attachment to the fetus or infant has occurred, an intense, long-lasting grief response will result. If parents have become attached to the pregnancy, but the fetus is still perceived as generic, without specific personality traits and identity, a relatively short, less intense grief reaction will follow. If a loss occurs before the parents have become attached to the pregnancy, fetus, or infant, little or no grief response will ensue, but parents may be very distressed regarding the physical symptoms

of cramping and bleeding that are often part of the experience of perinatal loss (Hutti).

Congruence between the Experience of the Actual Loss and the Parents' Standard of the Desirable

The standard of the desirable is the perceived ideal against which parents evaluate their experience of perinatal loss. It is the individual measuring stick each parent uses to determine if the experience of the loss is unfolding in the least traumatic way possible. Unless parents have had a previous perinatal loss, they usually do not have a standard of the desirable already developed for the experience of the loss. Therefore, the standard of the desirable generally develops as the experience unfolds, often in response to negative events. An example of the development of a parent's standard of the desirable is when a nurse avoids contact with a bereaved parent, and the parent responds by thinking, "I don't like it when the nurse does that; I wish she would talk to me and just say something like 'I'm sorry for your loss' instead" (Hutti, 1992; Hutti et al., 1998; Hutti, 2005).

Even if parents do not experience intense grief with their perinatal loss, the experience is always difficult. A loss often is accompanied by bleeding and pain, fear of the unknown, guilt, worry, and interaction with family members, friends, and health care providers who may not know how to appropriately comfort and support the parents. When the experience of the actual loss is congruent with the parents' standard of the desirable, it indicates that family members, friends, and health care providers are finding words and actions that parents perceive as supportive in the midst of the difficult experience. In this situation, the parents often will feel satisfied with their interactions with others and generally will feel supported in their experience of the perinatal loss. When the experience of the actual loss is widely divergent from the standard of the desirable, it is perceived as unfolding in a way that parents find unsupportive and unacceptable, and parents often respond with anger and feelings of victimization (Hutti, 1992; Hutti et al., 1998; Hutti, 2005).

The ability of parents to make decisions or act in ways to Increase congruence.

If the experience of the actual loss is developing in a way that is widely divergent from the parents' standard of the desirable, parents may choose to be assertive and confront others about their unsupportive words and/or behaviors. If parents are able to tell others what they want and need, often their experience of the actual loss may be modified so that it more closely aligns with their standard of the desirable. Another option is for nurses to find out what parents want and need and then serve as advocates in getting these needs met. If parents are unable to be assertive, and if nurses are unwilling to serve as their advocates, then parents may feel even more traumatized by the experience of the perinatal loss, thus adding to their grief intensity (Hutti, 1992; Hutti et al., 1998; Hutti, 2005).

In summary, grief after perinatal loss may range from no grief to an intense, long-lasting response. Hutti (1992) found the most intense grief response was associated with parents who perceived the pregnancy and fetus or infant as real, perceived the experience of the actual loss as widely divergent from the parents' perceived ideal, and perceived themselves as unable to do anything about it (see Figure 1).

Purpose. The purpose of this study was to evaluate the reliability and validity of the PGIS for identifying a woman's grief intensity in the subsequent pregnancy after a miscarriage, stillbirth, or neonatal death.

The specific aims of the study were to

1. Evaluate the dimensionality of the PGIS in women who are in the immediate subsequent pregnancy after a perinatal loss.
2. Evaluate the internal consistency of the overall PGIS scale and its subscales.
3. Determine whether grief intensity measured by the PGIS varies by type of loss in order to evaluate the construct validity of the measure.

Hypothesis 1: Women who experience miscarriage will have a significantly lower mean PGIS score than those with neonatal death.

Hypothesis 2: Women who experience stillbirth will have a significantly lower mean PGIS score than those with neonatal death.

Methods

Design

A descriptive, correlational research design was used in this cross-sectional, web-based study.

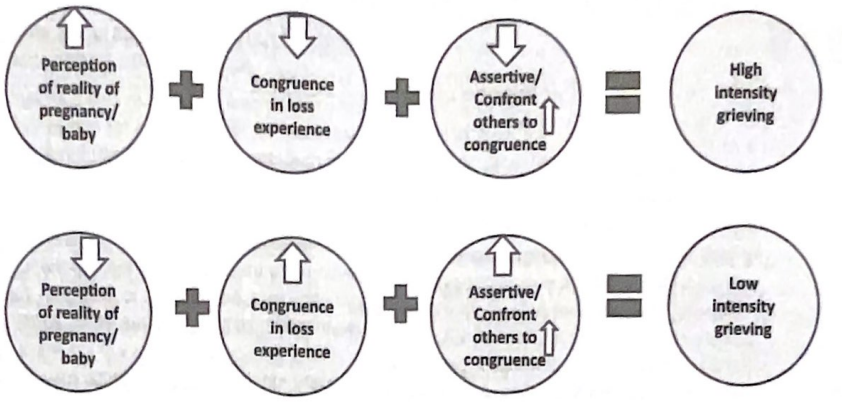

Figure 1. Perinatal Grief Intensity Theoretical Framework.

Sample

To enroll in the study, participants had to be currently pregnant and greater than 20 weeks gestation; had to have experienced a previous miscarriage, stillbirth, or neonatal death in their immediate past pregnancy; and had to be older than age 18, and speak English. Participants were 477 women who met the study inclusion criteria, accessed the web site over an 11-month period, and attempted to answer at least one question. The total sample size was based on the number of participants who answered all of the PGIS questions. A total of 227 women (48%) completed the data form and composed the sample for this study. This sample size afforded sufficient power (greater than 80%) to test the hypotheses. No Bonferroni corrections were performed because every outcome was viewed as important in isolation. Although the study was not restricted by gender, only women chose to participate.

Measures

The PGIS is a 14-item self-report questionnaire that was tested initially in a sample of 186 women who had experienced a miscarriage. Scoring of the PGIS is based on a 4-point Likert-type scale (1 = *strongly agree*, 4 = *strongly disagree*). Items 1, 2, 3, and 6 are reversed before obtaining item scores. The mean score for each subscale is computed by averaging subscale item scores and may range from 1–4. The total PGIS score is obtained by the following equation: Total PGIS score = **3.08** + (**.41** x mean Reality subscale score) – (**0.2** x mean Confront Others subscale score) – (**.15** x mean Congruence subscale score). Bold numbers are constants in this equation. Higher total scores reflect more intense grief (Hutti et al., 1998).

After the initial factor analysis (Hutti et al., 1998), three factors were extracted as predicted and were named: (a) realty of the pregnancy and fetus (Reality), (b) congruence between the experience of the actual loss and the standard of the desirable (Congruence), and (c) ability to confront others (Confront Others). The Reality subscale consisted of six items, which asked bereaved parents about their perceptions of how real the pregnancy or infant were to them at the time of the loss. Understanding how mothers perceive the reality of their pregnancies and infants is critical for health care providers to grasp the significance of the loss for the parent, and whether to treat it as a death. An example of a reality item is "I felt I had lost my son or my daughter, not just my pregnancy." The eigenvalue for the Reality subscale was 4.53, Cronbach's alpha was .89, and the subscale accounted for 32.25% of the total variance (Hutti et al.).

The Congruence subscale consisted of four items that asked bereaved parents about their perceptions of the congruence between the experience of the actual loss and their perceived ideal or standard of the desirable. An example of a congruence item is "During and after my perinatal loss, I was satisfied with the way my loss experience unfolded, given that I had to go through it." The eigenvalue for the Congruence subscale was 3.11, Cronbach's alpha was .71, and the subscale accounted for 10.4% of the total variance (Hutti et al., 1998).

The Confront Others subscale consisted of four items that asked bereaved parents about their perceived ability to make decisions or act

assertively to increase the congruence between the actual loss they were experiencing versus their perceived ideal. An example of a Confront Others item is "In the first hours and days after my loss, if people said or did things that made me feel bad, I was able to ask them to stop." The eigenvalue for the Confront Others subscale was 1.46, Cronbach's alpha was .84, and the subscale accounted for 22.2% of the total variance.

The three subscales together accounted for 65% of the total variance, and had a Cronbach's alpha of .82. The factor correlation matrix demonstrated low correlations between factors, which indicated that although a relationship existed among the factors, they measured different facets of grieving (Hutti et al., 1998).

Procedure

The study was reviewed and approved by the Institutional Review Board of a southern metropolitan university. Participants were recruited through the Internet from messages and links on women's health, pregnancy, perinatal loss, and perinatal loss support web sites. Participants were directed to the study web site and were asked to read a cover letter on the web site that introduced the investigators and described the study purposes in English at a fourth-grade reading level to increase readability and suitability. The cover letter was followed up by a consent letter in which participants provided consent before they could complete the study instruments. If they did not click *I agree to participate*, then study instruments remained unavailable. When they agreed to participate, study instruments were presented with a demographic data form first, followed by the PGIS (Hutti et al., 1998).

The study instruments and data form were completed in a point-and-click fashion. In addition, a counting system kept track of the number of people who logged onto the web site, visited the study introduction, completed the consent page, and completed all or part of the survey instrument. The web site also was set up so that once the participants completed the survey they could not re-access the web site from the same IP address.

Data Analysis

Three loss groups were identified by participants who had experienced a previous perinatal loss: (a) before 20 weeks of gestation (miscarriage), (b) after 20 weeks of gestation but before a live birth (stillbirth), and (c) after a live birth but within the newborn's first 28 days of life (neonatal death). Chi-squared analysis was used to evaluate differences among the three loss groups for categorical socio-demographic variables. Differences among the groups in continuous sociodemographic variables were tested using one-way ANOVA. Before the use of ANOVA, an exploratory analysis indicated that the assumption of normality was met for all variables examined. When extreme outliers were found by examining box plots, they were removed from the analysis. Exploratory factor analysis was conducted to examine the dimensionality of the PGIS. Cronbach's alpha was used to evaluate the internal consistency reliability of the total PGIS and its subscales.

A one-way ANOVA was performed to evaluate whether differences in scores of the PGIS existed based on the type of perinatal loss participants experienced in the previous pregnancy (miscarriage, stillbirth, or neonatal death). Tukey's post hoc pairwise comparison tests were performed to determine where the difference between the groups occurred. All data were downloaded in encrypted files from the web site and then analyzed using SPSS 19.

Results

Participants

The mean age of the women in this study was 31 years ($SD = 5.9$), the majority were White, and three fourths lived in the United States. More than one half of the participants had a college degree or higher and an income of $50,000 or more. The vast majority was married and had experienced either one or two previous perinatal losses (see Table 1).

Internal consistency reliability. The Cronbach's alphas for the PGIS total scale and subscales were high: 0.75 (PGIS total), 0.80 (Reality), 0.82 (Confront Others), and 0.80 (Congruence), indicating good reliability. Cronbach's alphas stratified by loss group were also high, which indicated good internal consistency reliability (see Table 2).

Dimensionality. Exploratory factor analysis (EFA) was conducted to identify the latent structure of the 14-item PGIS. Before conducting the EFA, we tested several of the statistical assumptions necessary for such an analysis. The Kaiser–Meyer–Olkin index of sampling adequacy was 0.70, which indicated that partial correlations were small and that the matrix was suitable for factor analysis (Tabachnick & Fidell, 2001).

Table 1: Sociodemographic Characteristics of the Study Sample ($N = 227$)

Variable/Category	*n* (%)
Female	227 (100%)
Race	
White	177 (78.0%)
Other	50 (22.0%)
Education	
<4 years College	68 (30.0%)
College Degree	92 (40.5%)
Master's Degree or Above	38 (16.7%)
Missing	29 (12.8%)
Income	
<$49, 999	68 (30.0%)
$50,000 – $75, 999	51 (22.5%)
>$80, 000	80 (35.2%)
Missing	28 (12.3%)
Married	
Yes	204 (89.9%)
No	20 (8.8%)
Missing	3 (1.3%)
Gestational Age Loss Group	
Miscarriage	96 (42.3%)
Stillbirth	82 (36.1%)
Neonatal Death	49 (21.6%)
Location	
USA	171 (75.3%)
Central America	33 (14.5%)
Other	17 (7.6%)
Missing	6 (2.6%)
Mean Age (*SD*)	31.0 (5.9)

Note. *SD* = standard deviation.

Bartlett's test of sphericity was statistically significant ($\chi^2 = 203.16$, $df = 91$, $p < 0.001$), and no evidence of multicollinearity or singularity was found (Tabachnick & Fidell). These results showed that the EFA could be adequately performed. In order to determine the number of factors to retain, two methods were used: (a) the eigenvalues greater than 1 rule, and (b) the scree plot to identify the number of factors above the elbow to retain and rotate (Cattell, 1966).

Table 2: Cronbach's Alphas Stratified by Group

	Miscarriage Group	Stillbirth Group	Neonatal Death Group
PGIS Total	0.77	0.79	0.68
Reality	0.79	0.86	0.71
Confront Others	0.84	0.87	0.75
Congruence	0.83	0.86	0.72

Note. PGIS = Perinatal Grief Intensity Scale

For initial examination of the items, principal components analysis with varimax rotation was used to maximize variance. This revealed three factors with an eigenvalue greater than one. In addition, the scree plot results suggested a three-factor solution similar to the original factor analysis in which three factors were retained (Hutti, dePacheco, & Smith, 1998). Because there were no items with a factor loading less than 0.40 and none cross-loaded, all of the original 14 PGIS items were retained.

These three factors accounted for 66.94% of the total variance (see Table 3). Judged by item content, the first factor comprised a combination of all the Congruence and Confront Others items as found in the original factor analysis (Hutti et al., 1998). This first factor was labeled Satisfaction and accounted for 34.62% of the variance. The second factor focused on all items associated with reality of the pregnancy (Q1, Q5-Q6) and was labeled Reality of the Pregnancy; it accounted for 22.13% of the variance. The third factor contained all items associated with reality of the fetus/newborn (Q2-Q4) and was labeled Reality of the Baby; it accounted for 10.19% of the variance.

Variations in grief intensity by type of loss. The PGIS total scores varied by type of loss in the subsequent pregnancy after a perinatal loss, $F(474, 2)] = 14.58$, $P = .002$. Post hoc comparisons demonstrated a significant mean difference of 1.16 between the stillbirth group (X = 2.81) and the neonatal death group (X = 3.97, P = .02), which indicated that the neonatal death group participants reported more intense grief in the subsequent pregnancy than the stillbirth group. In addition, post hoc comparisons indicated a significant mean difference of 0.13 between the miscarriage group ($\overline{X} = 3.84$) and the neonatal death group ($\overline{X} = 3.97$, $P = .007$), which

Table 3: Varimax Rotation of Three Factors Using Exploratory Factor Analysis for the Perinatal Grief Intensity Scale

	Factors		
Items	I	II	III
I felt satisfied with the way my loss experience unfolded, given that I had to go through it.	.63		
I felt satisfied with my interactions with my family.	.85		
I felt satisfied with my interactions with my nurses.	.56		
I felt satisfied with my interactions with my friends.	.78		
In the first hours and days after my pregnancy loss/baby's death I was able to ask people who said or did things that made me feel bad to stop.	.71		
In the first hours and days after my pregnancy loss/baby's death I was able to resolve problems if something happened that I did not like.	.76		
In later weeks after my pregnancy loss/baby's death I was able to ask people who said or did things that made me feel bad to stop.	.79		
In later weeks after my pregnancy loss/baby's death I was able to resolve problems if something happened that I did not like.	.70		
At the time my pregnancy loss/baby's death the pregnancy did not seem real to me.		.85	
At the time my pregnancy loss/baby's death occurred, my pregnancy and baby seemed real to me.		.93	
At the time my pregnancy loss/baby's death it seemed like the loss of pregnancy not the loss of a baby.		.50	
At the time my pregnancy loss/baby's death I did not think of the baby as a person.			.85
At the time my pregnancy loss/baby's death I did not think of the baby as having a personality yet.			.67
At the time my pregnancy loss/baby's death I felt that I had lost my son or my daughter.			.87
Eigenvalue	4.84	3.10	1.43
Explained Variance	34.62%	22.13%	10.19%

Note. [a]Only factor loadings of .40 or above are shown. [b]Factors: I = Satisfaction; II = Reality of Pregnancy; III = Reality of Baby.

indicated that the neonatal death group experienced more intense grief when compared with the miscarriage group. The mean difference of 0.08 on the PGIS between the miscarriage and stillbirth groups was not significantly different. No other pairwise comparisons achieved significance.

Discussion

The PGIS demonstrated good beginning total and subscale internal consistency reliability when used in subsequent pregnancy after all types of perinatal loss, including miscarriage, stillbirth, and neonatal death. The original 14 items of the PGIS were retained in this second factor analysis and also loaded onto three factors. However, the items loaded into the three factors somewhat differently in this second analysis compared with the first (Hutti, dePacheco, & Smith, 1998). In the first factor analysis, items loaded onto concepts described as reality of the pregnancy and fetus (Reality), congruence between the experience of the actual loss and the parents' standard of the desirable or perceived ideal against which the experience is being evaluated (Congruence), and the ability of parents to make decisions or act

Gestational age of the fetus is not a reliable predictor of grief intensity and need for follow-up after perinatal loss.

in ways to increase this congruence (Confront Others) (Hutti, 1992; Hutti, 2005).

In the current factor analysis, the first factor consisted of all of the Congruence and Confront Others items, which were loaded together into a single factor. The second factor consisted of all Reality items associated with the reality of the pregnancy. The third factor consisted of all Reality items associated with the reality of the infant. It is not surprising that the Congruence and Confront Others items were loaded together. In our clinical experience, the congruence between the experience of the actual loss and the parents' standard of the desirable is constantly being moderated by the mothers' ability or inability to be assertive about their needs and desires during a perinatal loss, and to confront others when necessary—or to have an advocate who will do so for them. Together, the concepts of Congruence and Confront Others form an overall satisfaction with the care and support received by significant others (e.g., family, friends, health care providers) during the experience of the loss. When a mother experiences low congruence with her standard of the desirable (e.g., nothing is occurring as the mother believes it should) and the mother perceives herself as unable to confront others about this incongruity, she will often feel angry and unsupported in the experience of the loss. When a mother who feels angry and unsupported also experiences a pregnancy of high reality, that is, the pregnancy and the infant are real to the parent, intense grief is likely to occur (↑Reality + ↓ Congruence + ↓ Confront Others = Intense Grief).

When the mother experiences high congruence with her standard of the desirable (e.g., almost everything is occurring as the mother believes it should) and she is able to confront others when incongruity exists, the mother often will feel a sense of satisfaction with care and support received during the experience of the perinatal loss. If the mother generally feels satisfied with her care and support also experiences a pregnancy of low reality, that is, neither pregnancy nor fetus or infant are real to the parent, little or no grief is likely to occur (↓ Reality + ↑ Congruence + ↑ Confront Others = Little or No Grief). Thus, the concepts of Congruence and Confront Others form the basis of a mother's satisfaction with her care. This satisfaction, coupled with how she perceives the reality of the pregnancy and infant, form the basis for whether she will experience intense grief after perinatal loss.

From a theoretical perspective, this study supports the concepts of the grief intensity theoretical framework of reality of the pregnancy and fetus, congruence between the experience of the actual loss and the mothers' standard of the desirable, and the ability of mothers to make decisions or act in ways to increase this congruence. The concepts of Congruence and Confront Others work together to influence the mother's overall satisfaction with care and support received by family members, friends, and health care providers during the experience of the perinatal loss.

Grief intensity varied significantly by type of loss, with the neonatal death group exhibiting the most intense grief compared with the stillbirth and miscarriage groups, thereby supporting the construct validity of the PGIS. Although grief intensity scores were higher in the stillbirth group than the miscarriage group, the difference was not statistically significant. It has been long known that seeing and holding an infant after birth will significantly enhance attachment (Kennell & Klaus, 1998). This enhanced attachment should translate into more intense grieving in the event of a neonatal death.

If a fetus should die during pregnancy, it is unlikely that attachment to the pregnancy and fetus is a matter of only having an increased gestational period (Shreffler et al., 2011). In this study, no differences in grief intensity were found in the miscarriage and stillbirth groups. Health care providers often expect that a parent who experiences a longer gestation and has a stillbirth always will grieve longer and more intensely when compared with a parent who has been pregnant for a few weeks or months and then experiences a miscarriage. Although it is common for parents of stillborn neonates to grieve intensely, numerous studies have documented that women and men who experience the loss of an early pregnancy may and often do experience significant grief as well (Hutti et al., 1998; Swanson et al., 2009; Swanson, Connor, Jolley, Pettinato, & Wang, 2007). Gestational age of the fetus is not a reliable predictor of grief intensity after perinatal loss. This is another reason why it is so difficult for health care providers to accurately identify parents in need of grief follow-up after a perinatal loss. We hope that the PGIS may eventually be able to assist health care providers with the difficult clinical decisions

about care that rest upon fully understanding the significance the loss has for the mother, as well as supporting a bereavement experience that is more congruent with the mother's needs.

Limitations

Because this sample was not random, the ability to generalize to an entire population is curtailed. This was an international sample, but the degree of English fluency of those participants for whom English was not a primary language is unknown and may have affected understanding of the instrument. Despite the international nature of the sample, the race of most of the participants was Caucasian, and responses from women of other races may have differed significantly from those reported here. In addition, these respondents sought out this web site and study; therefore, their grief and its consequences may have been more intense than that of other women who experienced similar perinatal losses.

Conclusions

The perinatal loss literature has documented adverse mental health consequences and health effects for parents and their subsequent children, and represents a tremendous burden of disease for the health of the nation. Improving a mother's mental health also may improve the health and well-being of her family. The findings from this study provided support for the reliability and construct validity of the PGIS, which may be used to identify women who have experienced miscarriage, stillbirth, or neonatal death and need intervention from a health care provider for the crisis of perinatal loss.

The PGIS initially was developed to be used in the first hours and days after a perinatal loss to help identify parents at risk of intense grief and in need of follow-up care by health care providers. It now also has been used in the subsequent pregnancy after a perinatal loss to identify women who are experiencing the most intense grief. There may be other uses for the instrument that are still not identified. This instrument can identify women at risk of high-intensity versus low-intensity grief reactions after perinatal loss. It needs further evaluation to determine cut-off scores for identifying need for follow-up by health care providers and its validity for predicting intense grief reactions when used near the time of the loss. Further evaluation of the scoring system also is warranted to determine if the PGIS needs to be simplified for clinical use, and if so, how that can be reliably accomplished. These are all areas of research that merit further study.

It is imperative that reliable and valid clinical instruments be developed so that health care providers direct scarce resources to those most in need.

Researchers have been studying the psychological consequences of perinatal loss for more than 40 years. However, very few randomized, controlled nursing intervention trials have been conducted to begin testing theory and frameworks in the area of perinatal loss (Swanson, 1999a, 1999b; Swanson et al., 2009). The need for theoretical, evidenced-based practice is significant everywhere in nursing practice, but there is a dearth of evidence surrounding interventions associated with nursing practice and perinatal loss.

As the researchers of this study found, it is common for mothers who experience a neonatal death to grieve intensely. Identifying grief intensity after miscarriage or stillbirth may be more difficult. Not all mothers grieve after perinatal loss, and for those who do, neither the gestational age of the fetus nor parental behavior are reliable predictors of current or future grief intensity. Health care providers want to help grieving families, but the first step in doing so is accurately identifying those who will most likely need follow-up and support. It is imperative that reliable and valid clinical instruments be developed so that health care providers may direct scarce resources to those most in need. It is time to use our accumulated knowledge to also test nursing interventions and perinatal grief clinical instruments to help promote healing and personal growth, foster couple relationships, and improve the quality of life for families who have experienced these devastating losses.

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