|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| Supplementary Table 1: Included articles according to the type of Perinatal Scale measuring grief following by their authors, year of publication, country and journal: Mourning scale (N=1), Perinatal bereavement scale (PBS) N=2, Perinatal Grief Intensity scale (PGIS) N=5, Perinatal Bereavement Grief Scale (PBGS) N=2, Attachment Perinatal Grief Scale (APGS) N=1, Perinatal Munich Grief Scale (PMG) N=3 and Perinatal Grief Scale (PGS) N=53: Total= 67 | | | | | | |
| Scales | Author  Year**,** Country  Journal | Study design | Kind of loss | Participants | Factors  Associated with Grief reactions | Conclusions |
| **Mourning scale**  + Life Events Schedule + Beck  Depression Inventory (BDI) | La Roche et al.  1988, Canada  Can J Psychiatry | Longitudinal Evaluations:  Immediate after  1 month, 3 months, 1 years, 2 years +semi structured interview at 2 years | 20 weeks gestation to  1 month afterbirth | 30 mothers  7 fathers  Total: 37 | social support, parents´ communication, maternal dreams  hospital practices | Fathers grief tend to be shorter and less intense  Intense mourning is considered normal but may turn pathological without support systems |
| **PBS** | Theut et al.  1989**,** USA  Am J Psychiatry | Longitudinal Evaluations:  Post-natal period  Subsequent pregnancy | Miscarriage, stillbirths neonatal | 25 couples | Late loss x early loss | Late-loss group: significantly greater grief during subsequent pregnancy of a viable child. |
| **PBS** | Theut et al  1990, USA  J Am Acad Child Adoles Psychiat. | Evaluations:  16 months after the birth of the subsequent child | Miscarriages stillbirths neonatal | 25 couples | Late loss X Early loss | Late perinatal loss: more unresolved grief 16 months after the subsequent child compared to parents with an early loss; Mothers with late loss displayed more grief after 16 months. |
| **MGS +**  Adult attachment Interview + Interview of perinatal loss + Social Support (SOZY-K-22) + quality f partnership + Depression and anxiety (HADC) + Brief symptom inventory (BSI) + PTSD | Sheidt et al  2012, Gernmany  J Psychosom Res | Qualitative and quantitative methods: | Miscarriage and perinatal death  Exclusion criteria: concurrent severe medical or psychiatric disease | 31 women  T1: baseline measurement at hospital admission within two weeks following the loss + T2: 4 weeks + T3: 4 four months + T4: 9 months (considered as bereavement outcome) | Individual attachment style (secure x insecure)  Social support  Quality of the current partner relationship | Secure attachment correlated negatively with symptoms of anxiety, depression and PTSD.  Attachment security allows a more flexible and appropriate way of coping  Some risk-factors: less favorable of bereavement outcome |
| **MGS** | Brier  2008, USA  J Womens Health (Larchmt) | Systematic review of scales to measure grief after miscarriage | Miscarriage | Summarizes the literature on grief measurements after early miscarriage | Nature of grief +  Incidence + intensity, + duration + identify potential moderators. | Large range of meanings for loss  Health care providers should  assist in helping concretize the experience. |
| **MGS +**  Anxiety + life events+physical complaints + anxiety | Beutel et al.  1995,  Germany  Psychother Psychosom Med Psychol | Longitudinal study  Validation | Miscarriages | 125 women  T1: Immediately after  T2: 6 months after  T3: 12 months after | social resources ambivalent attitude to the lost fetus  predicted depressive reactions | Grief measures were reliable  It is possible to discriminate between grief and depression. |
| Supplementary Table 1. (continued) | | | | | | |
| Scales | Author  Year**,** Country  Journal | Study design | Kind of loss | Participants | Factors  Associated with Grief reactions | Conclusions |
| **PGIS** | Hutti et al.  1998, USA  J Obstet Gynecol Neonatal Nurs | Mailed questionnaire  Development PGIS  Validity and reliability | Miscarriages in previous 12 to 18 months | 186 | Age  previous loss  history of infertility, subsequent pregnancy | Whether one factor  will influence grief appears to be determined by that factor´s meaning for the parent |
| **PGIS** | Hutti et al.  2013, USA  J Obstet Gynecol Neonatal Nurs | Cross-sectional, web-based study.  Descriptive, correlational research design | Subsequent pregnancy after perinatal loss | 227 women | Gestational age of the fetus | Neonatal grief was higher Gestational age: not a reliable predictor of grief intensity  Many parents continue to grieve previous losses with high anxiety |
| **PGIS**  + Pregnancy Outcome Questionnaire + Impact of Event Scale +Depression Scale + Autonomy and Relatedness Inventory | Hutti et al.  2015, USA  J Obstet Gynecol Neonatal Nurs | Correlational descriptive design with cross section | subsequent pregnancy after perinatal loss | 227 women | Pregnancy specific anxiety  Depression symptoms  Post-traumatic stress  Quality of intimate partner relationship | Greater grief intensity: associated with higher pregnancy-specific anxiety, depression symptoms, and post-traumatic stress as well as poorer quality of the intimate partner relationship. |
| **PGIS** | Hutti et al.  2017  Louisville, KY, USA  J Psychosom Res | Prospective survey using PGIS and PGS early after loss and 3 months later Compared PGIS with PGS | miscarriage, stillbirth, or neonatal death within the previous 8 weeks | 103 women recruited at hospital discharge or via the internet |  | No difference was found when the ability of the PGIS to identify intense grief was compared to the PGS |
| **PGIS** +  Beck Anxiety Inventory; Center for Epidemiologic Studies Depression Scale | Hutti et al  2018, USA  J Obstet Gynecol Neonatal Nurs | Prospective survey Time 1: 8 weeks of perinatal loss Time 2: 3 months later. | Perinatal loss | 103 Women | Anxiety and  depression symptoms in women | PGIS performs well at predicting severe depression symptoms and intense anxiety after perinatal loss. |
| **PBGS** +  yearning for the lost baby; Depression Scale (CES-D); Crowne Marlowe Social desirability Scale; Wantedness scale | Ritsher & Neugebeuer  2002, USA  Assessment | Cross-sectional and longitudinal assessments of PBGS reliability and validity in phone interviews in Spanish or English 1 to 3 times, until six months later | miscarriage | 304 diverse women in  terms of ethnicity, education, income, and marital status | Ethnicity, education, income, marital status, income, social marital status, reproductive history, # live children, previous loss, weeks gestational | High internal reliability; Convergent validity with attachment and investment in the child;  divergent validity social desirability and depression Supports distinction between grief and depression.  Cross-cultural validity for language and ethnicity; Yearning: key feature of mourning |
| **PBGS +**  WBQ-12 (Well-Being Questionnaire) | Koch et al.  2012, Portugal  Rev Lat Am Enfermagem | Correlation WBQ-12 with PBGS for reliability and validity of WBQ | All kinds of perinatal losses | 74 women four to six weeks after loss |  | WBQ-12 showed good discriminative validity when correlated to PBGS |
| Supplementary Table 1. (continued) | | | | | | |
| Scales | Author  Year**,** Country  Journal | Study design | Kind of loss | Participants | Factors  Associated with Grief reactions | Conclusions |
| **APBS** +  Sense of Coherence scale; Social support questionnaire; Search of meaning; spiritual orientation scale; Brief symptom Inventory; adult attachment scale | Uren & Wastell  2002, Australia  Death Stu | Quantitative and qualitative methods: Mailed questionnaires with all scales plus  2 open-ended questions: aspects of their personal grief experience and  comments on their current situation | Stillbirth and neonatal death | 109 women:  78 stillbirths  31 neonatal deaths | Sense of coherence; search for meaning | Sense of coherence and search for meaning significantly predicted current grief acuity. Mothers’ tenacity in holding  on to their emotional connection with their child. Grief shatters core life purposes. Need to reinstate meaning |
| **PGS +**  Marital relationship; religiosity scale; mental health Symptom Checklist-90 (SCL-90) | Toedter et al  1988, USA  Am J Othopsychiatry | Longitudinal with retrospective pre-test.  PGS Validation.  Three waves of interviews at 6 to 8 weeks following the loss, I year later and 2 years later | Spontaneous abortion,  fetal or neonatal death ectopic pregnancy | 194 women perinatal loss and 317 pregnant women´s retrospective data | Poor physical health;  Adv gestational age;  Marital satisfaction;  Poor mental health. | Each subscale contains items assessing depressive symptoms Grief measures in the form of preoccupation with the loss and separate from depression |
| **PGS +**  Symptom Checklist-90 (SCL-90) | Lasker e Toedter  1991, USA  Am J Othopsychiatry | Longitudinal study of people who have experienced pregnancy loss  4-6 weeks post- partum  1-year post loss  2 years post loss | Early losses:  18 ectopic  39 fetal death  18 neonatal death | 138 women and 56 male partners | Social support, Poor mental health, Age, Prior los, Education, Planned pregnancy, Suddenness of loss, Family support, Religious faith, economic stress, Environmental stress, Expectation of future, successful birth, History of infertility, | Coping resources: prior mental health and social support - best predictors of low scores Substantial correlation between depression and grief with decline over time. Delayed grief responses, among men early losses. |
| **PGS +**  Beck Depression Inventory (BDI) | Zeanah et al  1993, USA  Obst Gynecol | Case-control study: differences assessed one-way variance | Fetal anomaly: Termination x early spontaneous loss | 23 terminations and  23 early losses | Social class, Years of education, Gestational age, Good social support,  Younger age | Grief responses do not differ between two groups. In both groups, younger women had more intense grief, more difficulty coping, and more despair and depression. |
| **PGS** Translation, Validation, Reliability to Dutch language +  **Impact of Event Scale** | Hunfeld Br  1993, Holland  J Med Psychol | Audiotaped semi-structured interview with scales  2-6 weeks after diagnosis | late pregnancy lost due to lethal or severe fetal malformation | 46 Dutch women | Residual grieving across life span; interpersonal relations; partners' experiences after pregnancy loss. | Valid instrument to evaluate grief reactions in late pregnancy loss due to fetal malformation; internally consistent and strongly related to psychological instability due to residual grief, interpersonal relationships and partner experience |

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| Supplementary Table 1. (continued) | | | | | | | |
| Scales | Author  Year**,** Country  Journal | Study design | Kind of loss | Participants | Factors  Associated with Grief reactions | Conclusions |
| **PGS +**  Coping anxiety, impact of events | Harrigan et al  1993, USA  Neonatal Netw. | Comparative study: mother's and father's responses; analyzed PGS properties; described the experience | Loss of an infant from a multiple gestation pregnancy; | 27 parents | Time since infant´s death; length of infant´s life; mother and fathers comping strategies | Infant's life length, time since death and use of effective coping strategies were factors associated with grief reactions. Responses of mothers and fathers appear to be similar |
| **PGS +**  Symptom Checklist (SCL-90) + social support + marital relationship + care satisfaction | Cuisiner et al  1993, Holland  J Obstet Gynecol Reprod Biol | Retrospective comparative study of women which had miscarriage x stillbirth | Miscarriage and stillbirth | 150 miscarriage + 51 stillbirth | Pre loss mental health  Marital quality  Social support  Satisfaction with care | Intensity of grief is similar  Post loss care should be provided after miscarriage |
| **PGS +**  Semi struct interview + experience of delivery + saw/ named child? | Lorenzen & Holzgreve  1995, Germany  Fetal Diagn Ther | 1st interview: before loss 2nd interview: 1-2 days after the loss  PGS after 4-5 weeks | Termination due to fetalpathic reasons + spontaneous loss up to 24th weeks | 27 women terminated  9 women spontaneous loss  35 perinatal loss | Pregnancy duration,  Age, marital status, previous child losses | Not significant |
| **PGS** | Lin and Lasker  1996, USA  Am J Orthopsychiatry | Longitudinal study: 1 month, 1 year and 2 years after loss | All kinds of losses | 149 Men/ women | Marital satisfaction, Age, Social support, Late loss; Education, Planned, Type of loss, Previous loss; children; Subsequent child | More than half: non-normal grief patterns. Demographic variables and pregnancy history, before and after the loss, can explain some of the differences |
| **PGS** | Hunfeld JA et al  1996, Holland  Psycho Rep | Descriptive longitudinal study | Major fetal anomaly | 13 couples lost infant from congenital anomaly | Gender | Couples did not differ significantly in grief reactions one-half year after the loss of their infant |
| **PGS +**  Impact of Events Scale | Johnson MF and Puddifoot  1996, UK  Br J Med Psychol | Mailed questionnaire +scales + subsequent volunteer subsequent interview (N=42) | Miscarriage  Grief in men | 126 male partners of women who miscarriage | Longer pregnancy; seeing a confirmatory image; Having other children; Previous miscarriages. | Higher than anticipated levels of grief and stress were found; men were strongly affected by the miscarriage. |
| **PGS +**  Symptom Checklist  (SCL-90) | Cuisiner et al  1996, Holland  Acta Paediatr | Comparison study: grief following the loss of a newborn twin compared to grief after the loss of a singleton | Fathers and mothers who lost | 142 parents: 72 lost a newborn twin and 72 a singleton | Age; education level; no previous living children; previous loss; anticipated losing; newborn life span; gestational age | Bereaved twin parents did not differ in grief reactions from bereaved singleton parents |
| **PGS +**  Psychological distress GHQ-28; Dutch Personality Questionnaire | Hunfeld et al.  1997, Holland  Pat Educ Council | Comparison longitudinal study: immediately after, three months later and once a year until 4th years | Lethal anomaly after 24 weeks | 46 women | Feelings of inadequacy or 'neuroticism';  Emotional support | Care should include psychosocial screening of women identified as showing signs of inadequacy and paying attention to emotional support |

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| Supplementary Table 1. (continued) | | | | | | |
| Scales | Author  Year**,** Country  Journal | Study design | Kind of loss | Participants | Factors  Associated with Grief reactions | Conclusions |
| **PGS** | Janssen et al.  1997, Holland  Arch Gen Psychiatry | Prospective longitudinal 1st quest: 2140 pregnant women until 12 weeks'  followed the ones with had losses (227). Grief assessed 4 times | All kinds of losses | 227 women who had pregnancy loss | Longer pregnancy; Pre-loss psychiatry issues; no children; neurotic personality; Age; partner relationship; social support | Absence of living children, longer the gestational age, more neurotic personality, more pre-loss psychiatric symptoms related to higher grief scores |
| **PGS** | Puddifoot & Johnson,  1997, UK  J Reproduct Infant Psych, | Retrospective study on men´s reactions due to partners miscarriages | Miscarriage | 323 men whose partner had a miscarriage | Duration of pregnancy  Seeing Ultrasound | High scores for difficult coping and despair |
| **PGS** | Cuisiner et al  1998, Holland  J Psychosom Obstet Gyneacol | Prospective study: pregnancy after miscarriage  4 post-loss assessments 2, 6, 12 and 18 months after loss. | Miscarriages (85%) and perinatal loss (15%) | 227 women | Age, Education level,  No previous living children, previous loss, anticipated newborn loss, newborns´ life span, gestational age | Birth of a living child lessened grief. A speedy new pregnancy was only rarely found to be detrimental. Grief significantly intensifies following a new pregnancy loss |
| **PGS** | Puddifoot & Johnson, 1998, UK  British Journal of Health Psychology | Retrospective cohort study | Men grief responses after partners´ miscarriages | 158 men | Vivid visual imagery | Men with vivid visual imagery have more sense of a baby and more grief after loss |
| **PGS** + Impact on Family Scale (IFS) and 27 Functional Health Status Scale (FSII-R) | Hunfeld et al  1999, Holland  J Pediatric Psychol | Assessment of parental burden and grief one year after having a child with a congenital anomaly | Fetal anomalies  (immediately after, 1 month and 1-4 years) | 22 couples (PGS) +25 couples (IFS) and 27 women (FSII-R) | Multiples anomalies, Lethal anomalies, Parents´ Gender | no significant differences in overall burden (IFS) and grief (PGS). Mothers: significantly more personal strain; Burden and grief increased with low health status of the child and multiple congenital anomalies |
| **PGS** | Conway K & Russell G  2000, Australia  Br J Med Psychol | ER patients who had a miscarriage or had had one three weeks prior and their partners: Interview + PGS.  4 months later: Mailed Questionnaire + PGS | Miscarriage  Grief in  At the time and 4 months later | 39 women and 32 partners | Age, Soon after, Education, Previous child, Social economic status | No significant differences in factors. Partners scored significantly higher than the women in 1st and 2nd administration but not significant. |
| **PGS**  International comparison of studies using PGS +  Impact of Event Scale; clinical diagnosis of psychological instability. | Toedter LJ, Lasker JN, Janssen HJ  2001, USA and Holland  [Death Stud.](https://www.ncbi.nlm.nih.gov/pubmed/11785540) | Systematic review of a decade of research on pregnancy loss. | All kinds of losses | Describes 22 studies from 4 countries that used the PGS with a total of 2485 participants | Support from friends and family, Mental health | Fairly consistent scores, despite very different samples and types of loss; grief symptoms decline after 2 years; Social support consistently related to lower PGS scores; Poorer mental health related to higher PGS scores. |

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| Supplementary Table 1. (continued) | | | | | | |
| Scales | Author  Year**,** Country  Journal | Study design | Kind of loss | Participants | Factors  Associated with Grief reactions | Conclusions |
| **PGS** | Capitulo KL et L,  2001, USA  Aplic Nurse Res | Translation and back translation to Spanish by committee using a focus group interview techniques and expert translation |  |  |  |  |
| **PGS** +  Impact of Event Scale (IES), and the KJP Dream Inventory. | Kroth et al  2004 USA  Psychol Rep | Correlation between dream characteristics and scores in IES and PGS | All kinds of loss  Dreams may play in the grief-recovery process. | 37 women | Social support; Emotional expressiveness;  Negative marital status;  Dreams | Scores on IES correlated with Emotional Pain, Despair, Dreams of Death, Dreams of Water, and Dreams of Being Famous. Higher social support and emotional expressiveness showed lower scores on IES, and reported dreaming more in color |
| **PGS +**  Edinburgh Postnatal Depression Scale | Burgoine GA et al  2005 USA  Am J Obstet Gynecol | Prospective cohort: T1:Enrollment T2: 4 months, T3:12 months comparing grief after dilation and evacuation (D&E) X induction of labor (IOL) for second-trimester pregnancy termination. | Methods of termination induction x  Dilation + vacuum | 49 women: second trimester interruption for fetal malformation | Induction method | There was no significant difference in depression incidence on enrollment, at 4 months, or 12 months or on the PGS at 4 months or 12 months |
| **PGS** +  General Health Questionnaire-28 + Beck Depression Inventory + Impact of Event Scale (IES) | Davis et al  2005 UK  Ultrasound Obstet Gynecol | Cohort: T1:6 weeks; T2: 6 months; T3:12 months  compare psychological morbidity following 1st- and 2nd trimester termination for fetal anomaly | Termination at 1ndtrimester compared to 2rd trimester termination | 30 women |  | High levels of psychological distress in both groups  Those having second-trimester terminations had a significantly higher level of post-traumatic stress symptomatology 6 weeks after termination |
| **PGS** translation to Swedish | Adolfsson A & Larsson PG  2006, Sweden  Scan J Caring Scien | Translated and back-translated, linguistic, grammar and cultural differences | miscarriages | 12 volunteers anonymously answered the PGS twice |  | The intra-personal correlations were compared and analyzed with weighted kappa-coefficient. |
| **PGS** | Barr P.  2006 Australia  J Perinat Med | Repeated measures analysis of variance: relationship of grief at 1 month and 13 months after the loss and next pregnancy at 13 months.  After the interview, the parents completed the PGS longitudinal study | Grief after stillbirth or neonatal loss 13 months  Men and women grief differently | 63 couples who had been bereaved by stillbirth (n = 31) or neonatal death (n = 32) and who were either Pregnant (n = 20), Had a live baby (n = 10, Were trying (n = 11)  Were not Trying (n = 22) | Living children prior to loss; Trying to conceive after loss; Subsequent live child in women;  Subsequent live child in men; Freedom to choose to get pregnant after loss | The relation between grief and subsequent pregnancy differed between men and women: stronger in men compared with women. Subsequent pregnancy was related to Active Grief in women, but not to Difficulty Coping or Despair |

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| Supplementary Table 1. (continued) | | | | | | |
| Scales | Author  Year**,** Country  Journal | Study design | Kind of loss | Participants | Factors  Associated with Grief reactions | Conclusions |
| **PGS**  (Swedish short version) | Adolfsson A, Berterö C, Larsson PG.  2006, Sweden  Acta Obstet Gynecol Scand | Randomized study:  Intervention: structured follow-up with Midwife 1 month + mailed PGS at 4 months  Control: regular care | Prior to 13 weeks miscarriage | 88 women Intervention N=43 Control: N= 45 |  | 30% reduction of grief is the difference between group 1 and 2 but not statistically significant |
| **PGS** +  Impact of Events Scale + Partnership Questionnaire + Intimate Relationship Scale | Serrano et al.  2006, Portugal  Psychol Psychother | Questionnaires after 3 recurrent miscarriages  To learn about recurrent pregnancy loss on the couple’s relationship; to explore gender  differences in attitudes and grief intensity | Recurrent miscarriage  Impact | Each member of 30 couples with at least 3 recurrent miscarriages and no living children | Age, Gestational age, # of previous losses | Men grieve less intensely than their partners. Couple's relationship seemed to not be adversely affected by recurrent miscarriage but had sexual changes afterwards.  For women, grief was related to the quality of couple´s communication; For men quality of sex life. Higher the suffering, lower the perceived quality. |
| **PGS** +  Dispositional Envy Scale + Interpersonal Jealousy Scale + Personal Feelings Question-2 | Barr P & Cacciatore  2007, Australia  Omega Wesport | Empirical examination of the relation between personality proneness to problematic social emotions and perinatal grief | All kinds of loss | 441 | Personality proneness to problematic social emotions  > Time lapse | All four problematic emotions were positively correlated with maternal grief. Personality proneness to "problematic social emotions" Envy, jealousy, and guilt made significant unique contributions to the variance in maternal grief. |
| **PGS** +  Beck Depression Inventory II and unstructured interviews with some structured queries | Swanson et al  2009 Australia  Twin Res Hum Genet | Compared mothers´ and fathers coping strategies after death of at least one member of a multiple birth with at least one survivor of that birth | Twin loss | 52 couples | Gender: | Women (grief higher than in men)  Mothers: subscale despair predicted depression.  Fathers: difficulty coping predicted depression. |
| **PGS** + standard religiosity scales | Cowchock et al  2009 USA  J Relig Health | Descriptive: Women were followed-up for at least 1 year and evaluated for the impact of initial religious practices and beliefs on the course and severity of grief. | All kind of losses | 103 women enrolled in the original Lehigh Valley Perinatal Loss Project, | Religious struggle, continued attachment to the baby, negative religious coping | Religious Struggle was a powerful  predictor of greater grief. Negative religious coping, and continued attachment to the baby were all associated with more severe grief. |

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| Supplementary Table 1. (continued) | | | | | | |
| Scales | Author  Year**,** Country  Journal | Study design | Kind of loss | Participants | Factors  Associated with Grief reactions | Conclusions |
| **PGS** +  Symptom Checklist-90 (SCL-90) | Yan E et al  2010, China  Death Stud | Cross sectional study to validate PGS for use in Chinese women | Woman who have had recent loss | 314 women | Psychological distress;  Support from spouse | Women with high level of psychological distress and a low level of spousal emotional support reported higher levels of perinatal grief.  Chinese PGS is brief and easy to administer as screening tool |
| **PGS** +  Women's Role Integration Protocol (WRIP), and a personal profile tool designed specifically for the study | Van P et al.  2010 USA  J Natl Black Nurses Assoc | Descriptive study | Miscarriage after involuntary pregnancy | 86 women | Women´s age | Woman´s older age: more role satisfaction; Grief after miscarriage differed from other types of grief after perinatal loss: no focus for grief. The guilt is greater after miscarriage than after other types of perinatal loss. |
| **PGS** +  Qualitative Content analyses classified according to Bonanno and Kaltman’s categories | Adolfsson A  2010, Sweden  Ups J Med Sci. | Randomized study  Intervention: structured consultation based on  Swanson’s theory 4 weeks after their early miscarriages | Early miscarriage | 25 women randomized to intervention | Woman´s age, # of living children, #miscarriages, nature of miscarriage, gestational weeks | PGS is simpler to answer and to analyze. No statistical correlation between the amount of grief a woman feels and her age, #children, #miscarriages, nature of miscarriage, gestational weeks |
| **PGS** | Adolfsson A.  2011, Sweden  Psychol Res Behav Manag. | Meta-analysis to identify and analyze psychological reactions in women who have suffered a miscarriage | Miscarriage in wanted pregnancy | 14 studies were identified | Marital status, level of  Education; early loss; number of deliveries. None of the studies reported separate analyses of treatment effect by age, gender, race, and/or ethnicity | By using a measurement  of grief, we can identify women experiencing grief outside normal limits, and these women can be assisted by the health care system |
| **PGS** | Adolfsson A.  20011, Sweden  Psychol Res Behav Manag | Randomized Control Intervention: deeper and longer contact with midwife after loss  Control: regular care  PGS at 1 month + 4 months + questions about circumstances | Miscarriage | Intervention: N=43  Control: N=45 |  | Applied Swanson's Caring Theory in the follow-up care management of the women: better use of resources for those women who experience severe grief reaction after the miscarriage. |

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| Supplementary Table 1. (continued) | | | | | | |
| Scales | Author  Year**,** Country  Journal | Study design | Kind of loss | Participants | Factors  Associated with Grief reactions | Conclusions |
| **PGS** +  Hoge Scale for Intrinsic Religiosity (IR); Impact of Event Scale (IES); Duke Depression Inventory (DDI); Generalized anxiety disorder (GAD-7) | Cowchock et al  2011, USA  J Relig Health | Role of religious or spiritual beliefs or practices: a pilot test | Subsequent pregnancy after 3rd trimester termination due to fetal anomaly | N=15 | Maternal age, Long time since loss, Religiosity, other pregnancy losses, # live children | Women pregnant after termination due to fetal malformation often suffer from high levels of grief and forms of psychological distress. High levels of distress were not related to the length of time since the loss |
| **PGS** +  Edinburgh Postnatal Depression Scale, Anxiety Scale + marital satisfaction | Paris et al,  2011, Brazil and France  Rev esc Enferm USP | Cross-sectional, descriptive, exploratory study of Brazilian women living in the city of Maringá (PR) in the year 2013, and women who attended the Centre d’Études et de Recherche en Intervention Familiale(CERIF) Québec, Canada between 2010 and 2014. | Stillbirth | N=28 women in Brazil and  N=18 women in France | Lower # school years, religious practice; poor marital relationship; to have a professional support group | Complicated grief presented a higher prevalence in women with pregnancy longer than 28 weeks. Women who should be further investigated during the grief period are those living in Brazil, with no professional support or marital satisfaction and low educational level |
| **PGS** | Purandare et al  2012, Ireland  Ir Med J | Cross sectional study to verify whether the type of early pregnancy loss influences the severity of grief and whether the presence of living children influences the severity of grief | Early loss: miscarriage  Ectopic  Molar | 75 women | Presence of living children +> # of miscarriages  No children + ectopic | Women's experience of grief after any kind of early loss is similar |
| **PGS** +  Personal Feelings Questionnaire-2; Test of Self-Conscious Affect-2; Interpersonal Guilt Questionnaire-67 | Barr et al.  2012, Australia  Psychol Psychother | A cohort study: self-report questionnaires for grief, shame, and guilt in couples 13 months after loss using Actor-Partner Interdependence Model (APIM) method of dyadic analysis | Stillbirth and Perinatal death as narcissistic injury | 63 Australian couples bereaved by stillbirth  (N= 31) or neonatal death (N= 32) | Personality disposition to negative self-conscious emotion as shame and guilt  Couples intrapersonal and interpersonal relationships | Correlations between the self-conscious emotions and grief were invariably larger in men compared with women. |

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| Supplementary Table 1. (continued) | | | | | | |
| Scales | Author  Year**,** Country  Journal | Study design | Kind of loss | Participants | Factors  Associated with Grief reactions | Conclusions |
| **PGS** +  General Health Questionnaire-12 and Beck Depression Inventory | Lai BP et al  2013 China  Assessment | Translation/Validation/  Reliability/ Psychometric  Examined PGS correlations with two questionnaires at baseline. | Immediately after Miscarriage and 12 months later | 280 Chinese women |  | Chinese PGS was found to be a reliable and valid tool to measure grief following miscarriage |
| **PGS** +  PTSD; STAI (anxiety); BSI brief symptom inventor; BDI (Beck depression); IES (impact of event) | Curley et al  2013, USA  J Behav Health Serv Res | Descriptive design: Convenience sample comparing psychological outcome after abortion  Three-group comparison design: independent variable (wanted psychological follow-up after abortion); dependent variables: outcomes of depression, anxiety for the 3 groups, PSTD and PGS | Abortion in college students | 151 women  89: previous abortion  62 control group (never pregnant)  Of the 89:  48 treatment 41 no treatment | Coexisting mental health problem; Young age;  Less time since abortion;  History of multiple abortions | Psychological impact of having an abortion: severe and of longer lasting than previously estimated.  Stressful experiences: See fetus in ultrasound prior to abortion and no counseling before or afterward  Physical complications and long procedures: higher anxiety |
| **PGS** +  Impact of Event Scale- Revised (IES-R); Beck Depression Inventory-II (BDI-II) | Cope et al.  2015, USA  Pre Natal Diagno | Recruitment from data base and social media self-administered three instruments based on their current feelings, | Lethal Fetal malformation  Termination x Continuation | 158 women and 109 men | Termination  Recent loss  Religiosity | Higher scores in more recent losses; Pregnancy continuation less associated with psychiatric distress in women; Women who terminated: significantly more despair, avoidance and depression than women who continued the pregnancy; Organizational religious activity associated lower grief in both women and men |
| **PGS** +  semi instructed interview; Greenspan and Lieberman Observation Scale(GLOS); Stern's "R"-Interview; Brunet-Lézine Revised Scales (BL-R); Projective Kit for Early Childhood (PKEC) | Alexandre et al.  2016, Belgium  J Maternal fetal Neonatal Med | Descriptive methodology and qualitative data  Group 1: fetal loss from 0 to 16 weeks  Group 2: fetal loss from 17 to 27 weeks Group 3: fetal loss at 28 or more  Control group: no previous loss | Subsequent pregnancy after previous termination  Mother x baby relationship | 12 mother-infant (6-7 months old) couples, following prior termination of pregnancy, and 5 controls | Time of loss | Unresolved grief is associated with more pronounced disturbances: no dyadic exchange (GLOS); subsequent infant with language disruptions (BL-R) withdrawal from environment (PKEC).  Level of grief not related to gestational age at interruption |

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| Supplementary Table 1. (continued) | | | | | | |
| Scales | Author  Year**,** Country  Journal | Study design | Kind of loss | Participants | Factors  Associated with Grief reactions | Conclusions |
| **PGS** +  Maternal Postnatal Attachment Scale + Neonatal Perception Inventory II | Al Maharma et al  2016, Jordan and USA  Infant Ment health J | A cross-sectional, descriptive correlational design | Subsequent pregnancy after loss | 190 mothers of full-term, healthy newborns after recent loss | High risk pregnancy; post-natal child loss; loss of a male child; needed more than 1 year to get pregnant again, less education; losing a relative in the time of the loss; unemployment; pregnancy planned to replace the lost child; having a subsequent female child | Mothers' grief intensity was significantly affected by their demographic characteristics  Almost 1/4 of the women had low attachment levels with their current child. Women who intended to replace their previous child with the current child had significantly higher  levels of grief than those who did not have such an intent. |
| **PGS**:  Patient Health Questionnaire (PHQ); structured clinical interview | Kulathilaka et al  2016, Sri Lanka  BMC Psychiatry | Relationship between depression and grief in miscarriage group 6 to 10 weeks after miscarriage  compared to group of expecting women | Miscarriage | 137 women in each group (miscarriage x pregnant) | Ethnicity; Income; Religion; gestational age at time of loss; poor pre-loss mental health; Marital satisfaction; # living children; Professional support | Relative risk of developing a depressive episode after spontaneous abortion was not significantly higher compared to pregnant women after taking in account age and gestational age |
| **PGS +**  Edinburgh Depression Scale, Satisfaction with health care scale, # of children | deMontigny et al.  2017, Canada  Arch Womens Ment Health | Cross-sectional study: on line self-reported questionnaire | Post miscarriage | 245 women | time since miscarriage,  childlessness, and satisfaction with healthcare services | Miscarried within the past 6 months: higher scores  for depressive symptoms, grief symptoms significantly decreased across time only for women with children and women who were satisfied with healthcare services. |
| **PGS** | Jonhson OP& Langford RW, 2015, USA  J Obster Gynecol Neonatal Nurse | Randomized control PGS 2 weeks post-loss visit  Intervention: one-hour grief intervention  Control: regular care | Post miscarriage (8-20 weeks gestation | 40 women | Age; race; education;  marital status; income  gravidity; parity;  prenatal visit frequency; and pregnancy loss | Bereavement intervention soon after early miscarriage reduces grief risks |
| **PGS** | Roberts L, Montgomery S. 2016, India  Interdiscip J Best Glob Dev | Pre/ post-intervention  Intervention: five-week mindfulness-based intervention  Use of a community participatory approach | Stillbirth | 29 women | Gender of stillborn; gestational age; market permission; psychosocial problems; # living sons, | Significant decreased  levels of perinatal grief  Self-reported changes in their ability to cope.  Mindfulness-based interventions alleviated grief reactions |
| Supplementary Table 1. (continued) | | | | | | |
| Scales | Author  Year**,** Country  Journal | Study design | Kind of loss | Participants | Factors  Associated with Grief reactions | Conclusions |
| **PGS** +  Brief COPE;Posttraumatic Growth (PTG) | Lafarge  2017, UK  Anxiety Stress Coping | On line cross sectional survey to measure PTG post-termination Relationship between PTG, PGS and coping to determine the predictors of PTG6 weeks, 6 months and 12 months after | 2nd and 3rd trimester termination due fetal anomaly | 30 women | Adaptative coping strategies | Despite using mainly "adaptive" coping strategies, women's grief levels were high. |
| **PGS** +  Edinburgh Postnatal Depression Scale (EPDS), the Hospital Anxiety and Depression Scale (HADS) and the State-Trait Anxiety Inventory (STAI) | Maniatelli E et al,  2017, Greece  J Mat Fetal Neonatal Med | Translated and validated PGS to Greek language | First trimester loss | 166 women right after loss |  | PGS subscales positively correlated with the 3 other scales´ scores. PGS Greek version: useful instrument to detect psychological impact after a perinatal loss. Implications for scientific research and clinical routine. |
| **PGS** +  Beck Depression Inventory | Ridaura et al,  Spain, 2017  Psicotema | Three assessments were made after the loss (after 1 month, 6 months and 1 year) | Termination  or  Pre-postnatal death | 70 women who terminated pregnancy or a prenatal/postnatal death. | Age of the mother;  Social economic level;  Gestational weeks;  Having child; Previous miscarriage | Symptoms pertaining to grief and depression were observed in the first month after the loss, and a significant decrease in scores over the two follow-ups. |
| **PGS** | Rocha et al,  2018, Portugal  Arch Women mental health | Randomized Control Trial. Intervention: 4 individual sessions of psychological intervention Control: Regular care  At baseline, 15 days and 6 months | Pregnancy Termination after fetal anomaly diagnosis | Intervention N=24  Control N=67 | age; gestational age;  educational level; previous interruption;  history of infertility  history of psychiatry problems; previous children; diagnosis method | This intervention has very positive effects on women mental health  Emphasis on the importance of the meaning-making process in such context |
| **PGS** +  Dutch Grief Scale + Hospital Anxiety and Depression Scale (HADS). | Van Veen‐Doornenbal J et al  2018  BMC pregnancy and childbirth | Magnitude of grief 3 to 4 years after loss + Selected patients and their partners had a structured interview to evaluate the psychological counselling received at that time. | Death occurred between 22 gestational weeks until 28 days after birth | 44 mothers and 30 fathers/partners | Gender, elapsed time since death and time the baby lived | Long term grieving after perinatal death.  high scores on anxiety and depression show symptoms of traumatic grief.  Standard of care after perinatal death should include PGS and HADS scales to identify patients at risk and provide psychological aid |