THE LANCET Psychiatry

Supplementary appendix

This appendix formed part of the original submission and has been peer reviewed. We post it as supplied by the authors.

Supplement to: Zalsman G, Hawton K, Wasserman D, et al. Suicide prevention strategies revisited: 10-year systematic review. *Lancet Psychiatry* 2016; published online June 8. http://dx.doi.org/10.1016/S2215-0366(16)30030-X.

Combined prevention strategies

Some publications identified since 2005 have addressed the impact of combination and multi-level prevention programmes on suicide and suicide attempts. These include four quasi-experimental studies, all with an intervention and control region. (Germany- Nuremberg vs. Wurzburg; Hungary- Szolnok vs. Szeged; Japan- Yuri vs. Chokai as well as Minami vs. Shingou). A 4-level community-based intervention programme was implemented over a period of at least two years in Germany (Nuremberg) and Hungary (Szolnok). 1, 2 These programmes were identical and included: 1) training of primary care physicians in assessment and treatment of depression, 2) a public awareness campaign about depression, 3) training of community facilitators (e.g., social workers, priests, teachers, police officers, journalists), and 4) support for high-risk groups and self-help activities. In both studies, significant reductions were observed in suicide when the follow-up rates were compared to the baseline rates and to parallel rates in the control regions (Wurzburg; Szeged): in Hungaryby 60.% of completed suicides after three years and in Germany by 24% of attempted and completed suicides after two years. In the Nuremberg study, the effects were found to be sustainable in the follow-up year after the end of the twoyear intervention.³ Additionally, the effects of the four-level intervention programme were analyzed in the city of Regensburg, where the implementation of this programme was again associated with a significant reduction of suicides compared with the baseline.⁴

Implementation of a multi-level intervention program targeting older people (\geq 65 years) in Yuri (Japan) over an eight-year period resulted in a significant reduction in suicide rates among older females, but not in males, when compared with baseline rates and with rates in the control region (Chokai). The multi-level intervention

programme covered: 1) mental health workshops, 2) a group activity programme, and 3) self-assessment of depression. This programme was also implemented in another region (Minami) in Japan from 1999-2004, including a control region (Shingou), with similar outcomes. Process analysis provides evidence that the combination of different intervention measures has not only additive but synergistic and catalytic effects.

References

- 1. Hegerl U, Althaus D, Schmidtke A, Niklewski G. The alliance against depression: 2-year evaluation of a community-based intervention to reduce suicidality. *Psychol Med* 2006; **36**(9): 1225-33.
- 2. Szekely A, Konkoly Thege B, Mergl R, et al. How to decrease suicide rates in both genders? An effectiveness study of a community-based intervention (EAAD). *PLoS One* 2013; **8**(9): e75081.
- 3. Hegerl U, Mergl R, Havers I, et al. Sustainable effects on suicidality were found for the Nuremberg alliance against depression. *Eur Arch Psychiatry Clin Neurosci* 2010; **260**(5): 401-6.
- 4. Hubner-Liebermann B, Neuner T, Hegerl U, Hajak G, Spiessl H. Reducing suicides through an alliance against depression? *Gen Hosp Psychiatry* 2010; **32**(5): 514-8.
- 5. Oyama H, Watanabe N, Ono Y, et al. Community-based suicide prevention through group activity for the elderly successfully reduced the high suicide rate for females. *Psychiatry Clin Neurosci* 2005; **59**(3): 337-44.

6. Oyama H, Ono Y, Watanabe N, et al. Local community intervention through depression screening and group activity for elderly suicide prevention.

*Psychiatry Clin Neurosci 2006; 60(1): 110-4.